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ABSTRACT

Designed for policymakers and programs planners involved with the topic of teacher testing, this publication outlines issues involved in teacher testing and describes state-level activities in this area. A question-and-answer section provides general information on major types of teacher tests, prevalence of teacher tests, problems addressed by teacher testing, drawbacks, arguments against teacher testing, legal precedents, test implementation, teacher association attitudes, and the future of such testing. The next section presents six papers considering national perspectives on teacher testing. Titles and authors are: (1) "Historical Perspective" (J. T. Sandefur); (2) "Legal Considerations" (Martha M. McCarthy); (3) "Excellence and Equity" (Bernard R. Gifford); (4) "Teacher Supply and Demand" (Lawrence M. Rudner); (5) "Content and Difficulty of a Teacher Certification Examination" (Lawrence M. Rudner); and (6) "Assessment of the Teaching Skills of Beginning Teachers" (Gary R. Galluzzo). The final section presents state-by-state descriptions of the status of teacher testing. Appendices present two papers: "An Examination of Teacher Alternative Certification Programs" (Nancy E. Adelman) and "Technical Issues" (James Algina and Sue M. Legg); a list of competencies required by the Virginia State Department of Education; and a list of state contacts. (CB)

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What's Happening in Teacher Testing

An Analysis of State Teacher Testing Practices

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What's Happening in Teacher Testing

An Analysis of State Teacher Testing Practices

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The following copyrights are acknowledged:

Journal of Negro Education, Summer, 1986, Howard University

A Study Guide to the NTE Core Battery Tests, 1982, 1984, Educational Testing Service

August 1987

Foreword

As I noted in the introduction to *What Works: Research about Teaching and Learning*, Secretary William J. Bennett and I take seriously the responsibility of the Department of Education to gather information and generate knowledge about education in an efficient and energetic manner and then to make that information and knowledge accessible to people who might benefit from them.

This report, *What's Happening in Teacher Testing*, is designed for policymakers and program planners grappling with the topic. Issues involved in teacher testing are outlined and state-level activities are described.

In preparing this report, staff of the Office of Research, Office of Educational Research and Improvement (OERI), sought to provide an objective, impartial, and clear analysis. But it is no simple matter to succeed in these goals. Complex issues that permeate American education are often difficult to explain, and they frequently yield ambiguous or conflicting conclusions. The collection of facts and analysis in this report led us to certain conclusions. Individuals drawing other conclusions may disagree with our analysis. Such is the nature of reporting educational information.

This report could have been an uncritical compilation of unexamined descriptions of state-level teacher testing activities. Had we ended there, the report would have been a contribution. Yet these data are difficult to interpret. The average passing rate for teacher tests, for example, is about 83 percent. Is this high? Is it low? Are the test items too easy? Are the passing scores too low? These questions cannot be answered with simple statistics. The content of the instruments needs to be examined, the judgments of agencies responsible for the tests need to be considered, the number of items that must be answered correctly needs to be analyzed. By providing such context, this report attempts to provide information that can enhance decisionmaking about teacher tests.

The diversity of teacher testing programs and activities made the preparation of this report a complex process. Numerous people were involved in meeting this challenge, and we are grateful to them.

Lawrence M. Rudner, formerly a senior associate in OERI's Office of Research, now president of LMP Associates, coordinated the preparation of this report under the direction of John Taylor and Sally B. Kilgore. He assumed responsibility for the initial design of the work, conducting the 50 state surveys, and preparing several sections. J.T. Sandefur, Dean of the College of Education and Behavioral Sciences, Western Kentucky University, helped design the report, identify other contributors, prepare materials, and took a major hand in readying the final document. Kay C. McKinney helped prepare the state-by-state descriptions. OERI's Information Services directed the production of the publication; Cynthia Dorfman edited the book, and Phil Carr designed it.

State directors of teacher certification and testing willingly provided OERI with reports, press clippings, manuals, and legislative proceedings describing their programs. Based on those submissions, OERI staff drafted descriptions which were returned in November 1986 and in April 1987 to the state officials for editing and revising. Again, the directors took time from their busy schedules to provide assistance. Their names are appended to this report. We thank them all.

Perhaps the most illuminating portions of this report are the expert analyses of the issues. Besides Messrs. Rudner and Sandefur, the following individuals contributed the materials which add perspective to the data:

Nancy E. Adelman, Policy Studies Associates—Alternate Certification
James Algina, University of Florida—Technical Issues
Gary R. Galluzzo, Western Kentucky University—Performance Assessment
Bernard R. Gifford, University of California, Berkeley—Excellence and Equity
Sue M. Legg, University of Florida—Technical Issues
Martha M. McCarthy, Indiana University—Legal Issues

Particular thanks are also due to Elizabeth D. Heins of Stetson University, Pamela R. Getson of Children's Hospital in Washington, DC, and Daniel Koretz of the Congressional Budget Office for their comments and suggestions.

Three previously published reports describing teacher testing must be acknowledged, as they provided much of the background for this report: *Teacher Education in the United States*, produced by the American Association of Colleges for Teacher Education in June 1986; *The Impact of State Policy on Entrance into the Teaching Profession*, prepared by Margaret Goertz, Ruth Ekstrom, and Richard Coley of the Educational Testing Service as part of a Department of Education grant in October 1984; and *Competency Assessment of Teachers: The 1986 Report*, prepared by J.T. Sandefur, Western Kentucky University.

Finally, special mention must be made of Albert Shanker, who suggested this project. He is not responsible for the result, but deserves credit for the inspiration.

Chester E. Finn, Jr.,
Assistant Secretary and Counselor to the Secretary

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I.
Introduction

Can a state effectively boost the caliber of its school teachers by obligating them to pass a test? Do teacher tests promote excellence? Do they provide rigorous standards? The actions of 48 states clearly indicate a widening acceptance of the concept of teacher testing. Every state except Alaska and Iowa has adopted or is in the process of adopting some form of a teacher testing program.

As of April 1987, 44 states had implemented or decided to initiate a program requiring prospective teachers to pass a written test before being awarded full certification. Twenty-seven states were testing or planning to test applicants for admission to teacher education programs. Three states were testing veteran teachers as a requirement for recertification. Thirty-nine states have implemented or are considering implementing internship programs which involve an assessment component. Several of the states with alternative certification programs incorporate testing components. Finally, at least two states, Florida and Tennessee, are beginning to test teachers as part of merit pay plans.

While virtually all the states have made some form of commitment to teacher testing, the diversity of philosophies and attitudes toward the issue is substantial. The states differ in terms of when they test prospective teachers, what their tests cover, the difficulty of their instruments, and which tests are used. The issue of teacher testing covers not only *whether* teachers should be tested, but also *how* they should be tested and *when*. Virtually every aspect of teacher testing has been subject to considerable debate.

These issues of teacher testing are of concern not only to educators. Except for issues of finance, chairs of state legislative education committees find teacher preparation, certification, and testing to be among the foremost education issues confronting state legislatures.

The press has closely followed teacher testing; teacher test results are reported with much fanfare in city and regional newspapers. If the past is any indication, one can expect teacher tests to retain this prominent place during the next 2 years as 20 states report teacher test results for the first time.

While the number of programs is increasing, the philosophies and attitudes behind them are evolving and their particulars are changing. Passing scores are being adjusted, plans are being altered, some programs are being abolished, and new programs are being established. In weighing their options, policymakers are confronted with the responsibility of trading emotional and financial costs against the benefits teacher testing programs may provide.

As stated in the preface, this book is intended to provide objective and accurate information that will inform the debates. The report contains four major sections. A *Questions and Answers* section provides an overview of the report and an introduction to issues that are developed more fully in the subsequent chapters.

The section titled *National Perspectives* starts with an historical perspective on teacher testing. Although teacher competency tests began in the early part of the century, when most teachers possessed only high school diplomas, their resurgence is relatively new. The section also discusses legal issues that confront teacher testing activities. Based on precedents, there are some guidelines states may want to consider in implementing such programs.

The troubling issue of minority candidates failing the examinations has been one serious aspect of teacher testing. The section on National Perspectives provides some data with regard to minority performance, outlines several explanations for these results, and describes some recommended actions.

Teacher testing programs, as currently implemented, are primarily designed to keep unqualified individuals out of the profession. To help the reader evaluate this policy, data on teacher supply and demand are presented and discussed. The section also discusses the content of certification examinations and their difficulty indicating that state departments of education and schools of education generally find the examinations to be appropriate, but tend to establish relatively low passing scores.

Designed to aid the new teacher, beginning teacher assessment programs are gaining in popularity. A description of these programs, their advantages and limitations, is included.

The next major section contains *State-by-State Descriptions* of testing programs for admissions, certification, recertification, and performance testing. Descriptions of program histories, instruments used, and passing scores and rates are provided. The section shows the diversity of programs underway across the nation.

The book concludes with an *Appendix* providing background information pertaining to other sections. While the subsection on teacher supply and demand outlines the potential of alternative certification programs to sharply increase the supply side of the equation, appendix A illuminates alternative certification by describing elements common across seven such programs.

Decisions that must be made during test development and validation and which can affect the test characteristics are examined in appendix B. This discussion of technical issues involved in teacher test development and validation efforts provides additional insight into the issues raised in the subsection on teacher test content.

While paper and pencil tests are used to assess candidates' basic skill or subject matter knowledge, an increasing number of states are turning to on-the-job performance measures. As background performance testing, appendix C describes the skill areas covered by Virginia's Beginning Teacher Assessment Program.

Finally, the state-by-state descriptions would not have been possible if it weren't for the cooperation of the state testing directors. Appendix D contains their names and addresses.

Note:

1. Siegel, P. M., "Emerging Education Issues in State Legislatures in 1986", National Conference of State Legislatures, 1986.

II.

Questions and Answers Concerning Teacher Testing

1. What are the major types of teacher tests?

There are four major types:

1) *Admissions tests* are given to prospective teachers before being admitted to a teacher preparation program, typically within a college or university. These tests usually assess basic reading, writing, and arithmetic skills. Twenty-seven states are implementing such programs.

2) *Certification tests* are given either after exiting a teacher preparation program or before initial certification. These usually test knowledge about teaching and the teaching profession as well as basic skills. Several states also test for subject matter knowledge within an area of specialization. Forty-four states are implementing such programs, making certification tests the most common form of teacher testing at the present time.

3) *Recertification tests* are given to practicing classroom teachers as a condition for recertification. Three states have such programs.

4) *Performance assessments* are administered to beginning teachers, usually during their first year of teaching. The characteristics of a teacher's teaching style are observed by trained personnel, usually a mentor teacher, the principal, and a teacher education professor. These assessments usually assist the beginning teacher as well as determine whether the beginning teacher will be eligible for regular, nonprovisional certification. Seven states have programs that use observation instruments. Another 17 states are either in the process of implementing such a program or are in the planning and studying phase.

The first three types of tests—admissions, certification, and recertification—do not test actual teaching ability. Rather, they test knowledge and skills believed to be prerequisites to teaching and may test knowledge about teaching. Ability to teach decimal multiplication to children, for example, is not covered. Ability to multiply decimals, however, is. The tests do not evaluate many important human qualities such as dedication, caring, perseverance, sensitivity, and integrity and they cannot guarantee that an individual who passes will become a good teacher.[1] In principle, however, they can guarantee that an individual who passes is literate and/or knows the subject matter.

2. How prevalent are teacher tests?

As shown in table 1, every state except Alaska and Iowa has some form of teacher testing program or is in the process of implementing one. As of April 1987, the cutoff date for state-specific information in this volume, 24 states tested applicants to teacher education programs, 26 states tested individuals as a requirement for initial teacher certification, three states tested veteran teachers, and seven states used a formal observation instrument to assess the performance of beginning teachers. Several states plan to implement new or revised testing programs in the next few years.

3. What are the major teacher tests?

The test most commonly used for admissions to teacher education programs is the Pre-Professional Skills Test (PPST), produced by the Educational Testing Service of Princeton, NJ. Seven states use this test as part of their admissions testing program. The PPST covers basic reading, writing, and mathematics. Candidates have 2½ hours to take the test.

The NTE Programs, formerly called the National Teacher Examinations, is the most frequently used test for teacher certification and is also produced by the Educational Testing Service. Parts of this battery of tests are or will be used in 22 state teacher testing programs. The NTE is composed of a Core Battery covering the communication skills of listening, reading, and writing; the general knowledge of social studies, mathematics, literature and fine arts, and science; and the professional knowledge of teaching. The complete Core Battery contains 340 multiple-choice questions and one essay item. It requires 5½ hours to complete. The NTE also contains

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This section was written by Lawrence M. Rudner.

Table 1. A Summary of State Teacher Testing Programs, April 1987

State	Admissions Tests			Certification Tests			Recertification Tests	Performance Tests	
	test	implementation		test	implementation				
		in place	when		in place	when	in place	in place	under study
Alabama	Custom	X		Custom	X				
Alaska									
Arizona	PPST	X		Custom	X				X
Arkansas				NTE		?	X		
California	CBEST	X		CBEST	X				
Colorado	CAT	X		—		1987			X
Connecticut	Custom	X		NTE		1987			
Delaware				PPST	X				X
Florida	SAT,ACT	X		Custom	X			X	
Georgia				Custom	X		X	X	
Hawaii				NTE	X				
Idaho				NTE		?			
Illinois				Custom		1988			
Indiana	?		?	NTE	X				
Iowa									
Kansas				PPST,NTE	X				X
Kentucky	CTBS	X		NTE	X			X	
Louisiana	NTE	X		NTE	X				
Maine				NTE		1988			
Maryland				NTE		1987			X
Massachusetts				?		1989			X
Michigan				?		?			
Minnesota				PPST		1988			X
Mississippi	COMP	X		NTE	X				X
Missouri	SAT,ACT	X		?		1987			
Montana				NTE	X				
Nebraska	PPST		1987	PPST		1987			
Nevada	PPST	X		PPST		1990			X
New Hampshire				PPST	X				
New Jersey				NTE	X				
New Mexico	Misc	X		NTE	X				
New York				NTE	X				X
No Carolina	NTE	X		NTE	X			X	
North Dakota	NTE	X		?		?			
Ohio	?		1987	?		1987			
Oklahoma	Misc	X		Custom	X			X	
Oregon	CBEST	X		CBEST	X				
Pennsylvania				NTE		1987			X
Rhode Island				NTE	X				X
So Carolina	Custom	X		NTE,Custom	X			X	
South Dakota				NTE		?			X
Tennessee	PPST	X		NTE	X				
Texas	PPST	X		Custom	X		X		X
Utah	Misc	X							
Vermont									X
Virginia				NTE	X			X	
Washington	Custom, SAT,ACT	X							
West Virginia	PPST,COMP	X		Custom	X				X
Wisconsin	PPST		1989	?		1987			
Wyoming	CAT	X							X
Totals	27	23	4	44	26	18	3	7	17

ACT, CAT, CBEST, COMP, CTBS, PPST, SAT refer to the American College Testing Program, California Achievement Test, California Basic Education Skills Test, College Outcomes Measures Project, California Test of Basic Skills, Pre-Professional Skills Test, and the Scholastic Aptitude Test, respectively.

? - Indicates items that have not yet been decided.

subject-specific tests in 26 fields, with new tests added frequently.

Custom-made teacher certification tests are also available from National Evaluation Systems (NES), the second major producer of teacher tests. NES has developed more than 250 tests in over 90 content areas for several states.

In addition to the Educational Testing Service and National Evaluation Systems a number of test suppliers and consultants are also active in this burgeoning field.

4. What problems do teacher testing programs address?

Testing is viewed as one of several ways to improve teacher quality and the quality of American education. As stated by Governor Bill Clinton of Arkansas, "To those who feel insulted by the test, I can only reply that I think it is a small price to pay in exchange for the biggest tax increase for education in Arkansas history and for the contribution the testing process would make in our efforts to restore the teaching profession to the position of public trust and esteem it deserves."[2]

Test-enforced standards for admission to teacher preparation programs and for initial certification are seen by proponents as means to screen out unqualified individuals, to strengthen the profession, and to attract better qualified candidates. As a result of these programs, the public's confidence in teachers, teaching, and the schools is expected to improve.[3]

The need for tougher admissions and certification is reflected in *A Nation at Risk*,[4] the celebrated 1983 report of the National Commission on Excellence in Education, which found that "not enough of the academically able students are being attracted to teaching" and that "too many teachers are being drawn from the bottom quarter of the graduating high school and college students."

After studying trends in college admissions test scores, one researcher stated that "teaching never enjoyed a golden age when the best and the brightest entered the ranks."[5] The average Scholastic Aptitude Tests (SAT) verbal and mathematics scores of teachers and prospective teachers have typically been 40 to 50 points below national averages.[6]

The schools have not only been unable to attract the best and the brightest, they have not been able to keep them. Teachers with the highest SAT scores leave the profession in greater numbers than those with lower SAT scores.[7]

5. What may be the drawbacks?

There are at least two potential disadvantages to quantitative standards for teacher education program admissions and certification: 1) policies that restrict entrance to the profession may contribute to a teacher shortage and 2) a disproportionate number of minority students fail to gain entry into the teaching field due to low pass rates on these tests.[8]

If passing rates are an indication, admissions testing programs appear to be successful in restricting access to teacher preparation programs. For the states providing data, the average passing rate is approximately 72 percent.[9] Certification examinations, which are given to individuals who have completed teacher training programs, appear to be less restrictive; the state average passing rate in these cases is approximately 83 percent.

The impact of testing programs on minorities has been severe. Only 23 percent of blacks and 34 percent of Hispanics, for example, passed the Texas admissions test between March 1984 and March 1985.[10] In Louisiana, only 10 percent of students graduating from predominantly black colleges between 1978 and 1984 passed the certification test.[11] In 1980, minority teachers constituted approximately 12.5 percent of the national teaching force. This proportion may be reduced to 5 percent or less by 1990 if the current trends involving passing rates, as well as enrollment and attrition rates, continue.[12]

6. What are some of the arguments against teacher tests?

In addition to the two concerns cited above, some of the arguments against teacher testing are:[13]

1) Testing alone may not improve teacher quality, though it has the potential of screening out individuals whose academic preparation is weak. Rewards and working conditions are the most important factors in teacher recruitment.[14] The academic quality of teachers is probably affected more by the dynamics of supply and demand and by the luster and standards of the profession, than by testing or certification requirements.[15]

2) The tests reflect an overreaction to a problem that may not exist. The public is not as concerned with teacher quality as the media suggest, and difficulty in hiring teachers is not a high ranking concern.[16]

3) The tests are inappropriate. Skills needed in one situation may not be necessary in another. Teaching in inner city schools, for example, is not the same as teaching in suburban schools.[17] Tests emphasize lower order skills.[18] They do not adequately represent what a teacher should know and be able to do.[19] The tests emphasize knowledge, not performance, ethical values, creativity, emotional maturity, or attitudes.[20]

4) Testing will hurt the profession. More constraints by the state, such as testing, will result in greater teacher militancy.[21] Tests eliminate diversity and flexibility in teacher education programs.[22]

5) The tests provide an insufficient standard. They cover skills that are not important and passing scores are so low that passing the test does not prove anything.[23]

7. What legal precedents have been established?

Teacher tests for certification resemble other forms of employment tests and must meet certain legal standards. *Griggs v. Duke Power Company*, for example, established that employment tests must measure skills actually needed for a job when the test adversely affects groups protected by Title VII of the Civil Rights Act of 1964.[24]

Since the early 1970's, the use of teacher certification tests has been argued in several courts. The landmark case, *United States v. South Carolina*, established that states can use written tests that have been designed and validated to disclose the minimum amount of knowledge necessary for effective teaching.[25]

Based on case law, certain guidelines appear prudent: 1) tests affecting job status should be shown to be job related and serve legitimate school objectives, 2) instruments should be constructed by qualified professionals, 3) the instruments should be validated for the specific jobs for which they are used, and 4) individuals should be provided with adequate notice of the test requirements.

8. What is involved in implementing a teacher testing program?

State-sponsored teacher testing programs must begin with the authority for such a program. This usually stems from either legislative or board of education action. There is usually widespread participation of concerned constituencies in the development of the policies. Instruments are then examined, validation studies are conducted, passing scores are established, and information materials are prepared. A system for monitoring and reporting the results of the program is also developed.[26]

Costs to the state depend upon the tests selected, the complexity of the policy, the system of monitoring and reporting, and the charges to the examinee. The most expensive route is for the state to have a custom-made test developed and then to pay for its administration. Teacher tests cost approximately $50,000 - $100,000 to develop and $5,000 - $50,000 to validate.[27] A test program consisting of a basic skills test and 25 subject matter tests can cost close to $1,000,000 to develop and over $100 per examinee to administer and score. These costs do not include the costs for a state department of education to manage and evaluate the program.

The least expensive route is to use a ready-made, nationally recognized instrument and have the candidates pay for administration costs. A testing program using an off-the-shelf basic skills test and 25 subject matter tests would cost approximately $100,000 to validate.[28] Scoring and administration costs would be the same, approximately $100 per examinee.

9. How is teacher testing viewed by various organizations and groups?

Many organizations and groups support fair and objective evaluation. Their definitions of fair and objective evaluation, however, differ. There is often disagreement regarding who should be evaluated, what should be evaluated, and how evaluation should be conducted. The following is an abbreviated list of some attitudes toward teacher testing:

1) National Education Association (NEA)—The NEA has a history of questioning inappropriate and unfair testing practices and has been actively involved in precedent setting student and teacher testing litigation. While the NEA was originally against the use of the National Teacher Examinations,[29] the organization recently adopted a stance in favor of requiring prospective teachers to pass valid professional knowledge and subject matter tests. The NEA remains opposed to testing veteran teachers.

2) American Federation of Teachers (AFT)—The AFT has been a longtime advocate of testing and has supported the use of "accurate and appropriate measures to certify teachers."[30] In 1985, the AFT took an even stronger stance when its president announced that the association was willing to limit its membership to individuals passing a rigorous teacher competency test.[31]

3) American Association of Colleges for Teacher Education (AACTE)—"In recognition of the need for quality teacher education, AACTE supports a test of basic skills as a criterion for entry or continuance in teacher education programs."[32]

4) Council of Chief State School Officers (CCSSO)—The Council recommended that a system of assessing and screening prospective teacher candidates should be implemented in every state.[33]

5) Carnegie Forum on Education and the Economy—This group has stated that a national board for professional teaching is needed to establish high standards for the profession. Assessment will be a key aspect of its board certification program.[34]

6) Holmes Group (a consortium of university-based schools of education)—The Holmes Group "commits itself to develop and administer a series of professional teacher examinations that will provide a credible basis for issuing teaching credentials and licenses."[35]

7) General Public—In the 1986 Gallup Poll, 85 percent of the public believed that prospective teachers should be required to pass a state examination to prove their knowledge in the subjects they plan to teach.[36]

8) Teachers—In the 1984 Gallup Poll, 63 percent of the classroom teachers believe that prospective teachers should be required to pass a state examination.[37] In a 1986 readership survey, *Instructor* magazine found that 59 percent of the respondents would support a fair and valid teacher evaluation system.[38]

10. Where is teacher testing headed in the near future?

It takes several years to implement a teacher testing program. In the immediate future, we can expect to see the programs that were adopted several years ago being carried out for the first time. During 1987, for example, nine states will be starting certification tests, and three states will be starting admissions tests. In 1987, one of the states with recertification testing will be releasing the final results of its 2-year program.

Most new activity in the area of teacher testing will involve assessment programs for beginning teachers. Certification requirements in many states are being altered to require several years of demonstrated successful teaching experience prior to being awarded regular certification. Thirty-nine states are considering or have established some form of formal beginning teacher program.[39] Seven states have an existing program involving an observation instrument; another 17 states are either planning or studying observation systems.

After the May 1986 release of *A Nation Prepared: Teachers for the 21st Century,*[40] the Carnegie Forum on Education and the Economy is destined to become a major player in the area of teacher testing. It is funding several large research studies which it believes will lead to the establishment of a board licensure program providing high standards and recognizing master teachers meeting those standards. The board members will be announced in the summer of 1987.

11. What questions concerning teacher testing have not yet been answered?

Some important questions that have yet to be satisfactorily answered are:

1) Does the ability to perform on an admission, certification, or recertification test relate significantly to classroom performance?

2) Do teacher testing programs actually yield improved public confidence?

3) Do existing observation instruments accurately indicate everyday classroom behaviors?

4) Which other modes of assessment beyond paper and pencil tests can be used for improved teacher testing?

5) What are the lower limits of knowledge and skill necessary to teach different ages and different subjects effectively?

These unanswered questions challenge some of the basic assumptions behind current teacher testing practice. Answers to these questions, especially the last question, could indicate a need for radically different forms of testing.

12. What is the viewpoint of the project director?

Let me first state that the following views are not necessarily shared by other authors of *What's Happening in Teacher Testing* or by the U.S. Department of Education. In developing the book, we have made an effort to present objective information, void of personal views.

I believe the rationale behind teacher tests is sound. Tests can provide standards, which in turn, can improve the quality of instruction being provided in our schools. Many current certification testing programs, however, do not provide adequate standards and, hence, cannot live up to expectations.

The content of some teacher testing programs precludes their ability to provide an adequate standard. What type of standard is a simple literacy test, covering basic reading, writing, and mathematics skills? At best, such programs can assure that teachers are not illiterate. The public expects more from teachers and teacher testing programs.

Administering basic literacy tests to college graduates indicates that the series of checks and balances are not working. Illiterates are not only getting past eighth grade, they are graduating from high school, they are getting into college, and they are graduating from college. Meaningful standards at these earlier levels would render this form of teacher testing unnecessary.

The common practice of establishing extremely low passing scores further diminishes the ability of many teacher testing programs to support meaningful standards. In the name of protecting the marginally qualified, many states make large downward adjustments in passing scores. As a result, few states have effective teacher testing programs. Only the grossly incompetent are denied access to the profession.

Teacher testing can, however, provide a meaningful standard, and it does in states willing to pay the costs for an improved teaching work force and a serious testing program.

Several states are now using subject matter tests as a requirement for certification. This is appropriate; one must know content in order to teach it. People who do not know the content should not be permitted to mis-teach children. These subject matter tests are much more relevant than basic literacy tests.

Several states are also starting to implement beginning teacher assessment programs. These programs have the potential to address the basic question: can this particular individual actually teach? These programs provide support for new teachers as they assume classroom responsibilities. At the same time, they identify individuals who do not belong in the schools.

Teacher testing is frequently seen as a means for restricting access to the profession. Tests can and should be used to improve access to the profession. Individuals who know and love a particular subject should be given an opportunity to impart that knowledge and attitude to school children. A subject matter test can verify whether they have the knowledge. A classroom observation and evaluation system can be used to verify whether they have the skill.

Notes:

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4. U.S. Department of Education, *A Nation at Risk*, Washington, DC, 1983.

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17. Sikula, J.P., "Concerns about Teacher Competency Tests in Indiana," *The Teacher Educator*, 20, 1, 1984, 14-19.

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21. Killian, M.G., "Local Control: The Vanishing Myth in Texas," *Phi Delta Kappan*, 66, 3, 1984, 192-195.

22. Sikula, op. cit.; and M.C. Pugach and J. Raths, op. cit.

23. See quotations in L.A. Shepard, A.E. Kreitzer and M.E. Graue, "A Case Study of the Texas Teacher Test: Technical Report," Los Angeles: University of California, Center on Student Testing, Evaluation and Standards, 1987.

24. *Griggs v. Duke Power Company*, 401 U.S. 424 (1971).

25. *United States v. South Carolina*, 445 F. Supp. 1094 (1977).

26. Sandefur, op. cit.

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29. National Education Association, Report of the NEA Task Force on Testing, 1975. Referenced in National Education Association, *Standardized Testing Issues*, Washington, DC 1977.

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31. Shanker, A., "A National Teacher Examination," *Educational Measurement: Issues and Practice*, 1985, 4, 28-31.

32. Resolution passed at the 1984 annual meeting of the American Association of Colleges for Teacher Education, Dallas, Texas.

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39. See J.L. Bray, P. Flakus-Mosqueda, R.M. Palaich and J.S. Wilkins, *New Directions for State Teacher Policies*, Denver: Education Commission of the States, December 1985.

40. Tucker, M. and D. Mandel, op. cit.

III.

National Perspectives

The 1986 Gallup Poll of the Public's Attitudes Toward Public Schools revealed a statistic that underscores the extent of public support for the concept of teacher testing. Eighty-five percent of the respondents felt that prospective teachers should be required to pass a state examination in the field they intend to teach. This strong endorsement implies that the public wants to be reassured that new teachers are qualified and that they feel tests are capable of providing that reassurance.

State departments of education and state legislative bodies have adopted policies consistent with the Gallup Poll finding. Teacher testing programs, in one form or another, are being implemented in 48 states. The resurgence of state teacher testing programs raises a large set of new questions. Are testing programs capable of providing quality control? Do they succeed? What impacts are teacher tests having? What are the legal implications? Where is teacher testing headed?

In this chapter, teacher testing is examined from a national perspective. Essays on the evolution of teacher testing, legal issues, equity issues, teacher supply and demand, test content and performance assessment provide detailed information to help the readers answer these questions for themselves.

Historical Perspective

How did teacher testing evolve? Are new trends emerging?

Providing assurances that teachers possess the necessary basic knowledge and skills is not new. In the early part of this century, when most teachers had only a high school diploma, competency tests of basic skills were administered to prospective teachers in most states. Through subsequent years, the states increased the educational requirements for teacher certification, requiring baccalaureate degrees with specified courses providing a broad, general education, an academic specialization, and instruction in pedagogy. During these years, teacher testing programs declined. Quality assurance was seen primarily as the responsibility of the teacher preparation institution. States exerted some control by way of licensure requirements and program approval. While some locations continued to test prospective teachers, teacher testing became a dormant issue nationally and remained so for almost 50 years.

Public Mandate

The issue of teacher testing may have remained dormant had not a number of events occurred that caused the public to question the condition of the nation's schools. The launching of Sputnik has been credited with raising the question of the adequacy of science education in America. The concern for the quality of teachers was evident by the avalanche of publications in the 1960's and 1970's that were highly critical of the schools. Books by prominent authors such as James B. Conant, John Holt, James Koerner, Charles Silberman, and others raised questions about the quality of American education including the education, or "miseducation" as they labeled it, of American teachers. The 10th anniversary issue of the Education Supplement of *Saturday Review*, September 19, 1970, for example, was called "The Crisis in Confidence" and included articles entitled "The End of the Impossible Dream" and "Who Needs Schools?" Collectively, the articles took the position that the schools were failing both the advantaged and the disadvantaged students.

It was also during this era of the late 1960's and early 1970's that student test scores were dropping. Scores on the Scholastic Aptitude Test and the American College Testing Program test declined steadily. According to the Congressional Budget Office, this decline was severe and an appropriate cause for alarm.[1]

In the mid 1970's, a movement to assess the competency of students in elementary and secondary schools began to sweep the nation. So powerful was the notion that the nation's public school students were barely literate, that by March 1978, 33 states had taken action to mandate the setting of minimum competency standards for elementary and secondary students. Moreover, all the remaining states either had legislation pending or state department of education studies underway.[2]

The move to test the competency of students had significant public support. The 1976 Gallup Poll of the Public's Attitude Toward the Public Schools showed that 65 percent of those surveyed answered "yes" to the question, "Should all high school students in the United States be required to pass a standard nationwide examination in order to get a high school diploma?"[3]

In the process of establishing student testing programs, state departments of education were acquiring skills in working with test developers and hiring measurement professionals. With qualified staffs and experience in student testing programs, state departments of education developed the capacity to mount virtually any kind of testing program including a program to assess prospective teachers. If the public, alarmed by reports of barely literate students graduating from high schools by the thousands, had inspired some sort of mandated minimal competency tests for students, why not do the same for teachers?

In an editorial in the December 1979 *Phi Delta Kappan*, editor Robert Cole wrote:

> Should teachers be required to pass a state examination to prove their knowledge in the subjects they will teach when hired? Can we no longer trust teacher preparatory institutions—approved by state, regional, and national accrediting agencies—to weed out weak teachers? Can we not rely on the screening that takes place when a district hires new teachers?

This section was written by J. T. Sandefur, Western Kentucky University.

Should teachers be retested every few years to see if they are keeping up to date? In the most recent Gallup Poll of the Public's Attitudes Toward Public Schools, 85 percent of those polled said yes, teachers should be required to pass a state exam in their subject and they should be continually retested.[4]

Closely following the reports of declining student test scores and negative press, a number of prestigious organizations came forth in support of teacher testing. The American Association of Colleges for Teacher Education (AACTE) was among the first to endorse such testing. That association passed two significant resolutions at its annual meeting in Dallas, Texas in February 1980:

1) In recognition of the need for quality teacher education, AACTE supports a test of basic skills as a criterion for entrance or continuation in teacher education programs.

2) In recognition of the need for quality teacher education, AACTE supports a program of assessment of professional skills as an exit requirement for teacher education programs. The assessment should include (a) communication skills, (b) human relations skills, (c) generic teaching skills, and (d) subject matter proficiency.

The ad hoc committee on Teacher Certification, Preparation, and Accreditation of the Council of Chief State School Officers recommended "...that a system of assessing and screening prospective teacher candidates should be implemented in every state."[5] The National Education Association's Standards for Approving College of Education Programs listed a standard that recommended "procedures for student admittance, continued enrollment, and graduation."[6] Adding further encouragement to the testing movement, *A Nation at Risk* stated, "We recommend that schools, colleges, and universities adopt more rigorous standards and higher expectations for academic performance and student conduct and that 4-year colleges and universities raise their requirements for admission."[7]

Prompted by falling test scores, concern about the quality of schools and schooling, and reports from prestigious committees and organizations, a teacher competency movement began in the late 1970's that had encompassed the nation by 1986.

The Development of Teacher Competency Tests

The rapid growth of teacher competency testing in contemporary America has been one of the fastest movements in education. From 1964 to 1977, only North Carolina required a teacher certification examination. The practice of teacher testing for certification was reintroduced in 1977 in Louisiana. One year later, Florida started to develop its teacher testing program.

In the following years, other states mandated various forms of teacher testing programs. As seen in table 2, 10 states mandated teacher testing prior to 1980, 4 mandated testing in 1980, 5 in 1981, and 8 in 1982. Ten states joined in 1984, making that the year with the greatest amount of activity since the inception of the movement. Since implementation dates usually follow the mandates by 2 or 3 years, in 1986, 8 states implemented their first teacher testing programs; and another 4 states will start programs in 1987.

Most state teacher testing programs have stemmed from state board of education mandates. Though the first states to enter teacher testing did so by legislative mandate, since 1982, the mandates have usually been issued by the state board. Only 19 states established programs in response to the state legislature, while 29 states established their programs in response to their state boards of education.

Testing for Admission to Teacher Education Programs

Although individual colleges of education have been testing prospective students for years, uniform state standards for assessing prospective teachers' competencies in basic skills prior to admission is recent. Of the 27 states with such policies, only Tennessee's 1979 implementation occurred prior to 1980.

While teacher education institutions claimed selective admissions, they did not require tests of basic skills. A 1972 study of admissions procedures by 180 randomly selected member institutions of the AACTE found that practically all used some form of selective admissions procedure. Only 17 percent used professional examinations of any type. The most frequently used test was not a college admissions test, such as the SAT or ACT, but rather the Minnesota Teacher Attitude Inventory, first published by the Psychological Corporation in 1951.[8] The primary criteria for selection, however, were grades, recommendations, and interviews.[9]

On-the-job Assessment of Teachers

A relatively recent trend among the states has been to require an internship as part of a beginning teacher assessment program. Prior to 1980, only Georgia formally assessed teacher performance as part of the certification process. Specifically, Georgia issued a non-renewable certificate which was valid for 3 years during which time the teacher must have demonstrated acceptable performance in 14 generic teaching competencies. Georgia was followed by Florida in 1980 and by Oklahoma in 1982.

Oklahoma's Entry-Year Program is typical of such programs. In Oklahoma, individuals are issued a one-year license upon completion of an approved teacher preparation program.

Table 2. State Teacher Testing Programs by Year Mandated and by Year Implemented

State	Year of Mandate								Year of Implementation									
	<1980	1980	1981	1982	1983	1984	1985	1986	<1980	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama		E									X							
Arizona		L									X							
Arkansas	L												X					
California			L										X					
Colorado			L										X					
Connecticut				E									X					
Delaware				E									X					
Florida	L									X								
Georgia	E								X									
Hawaii						E										X		
Idaho								E								X		
Illinois							L								X			
Indiana						L										X		
Kansas						L							X					
Kentucky				L					X									
Louisiana	L																	
Maine						L												X
Maryland								E									X	
Massachusetts	E											X						
Michigan								L										
Minnesota							L											X
Mississippi				E												X		
Missouri			E												X			
Montana							E									X		
Nebraska						L										X		
Nevada						E									X			
New Hampshire						E									X			
New Jersey						E							X					
New Mexico			L											X				
New York						E						X						
No. Carolina	E																	
North Dakota								E										
Ohio							E										X	
Oklahoma		L										X						
Oregon				E											X			
Pennsylvania						E											X	
Rhode Island				E												X		
So. Carolina	L												X					
South Dakota							E									X		
Tennessee	E								X									
Texas			L											X				
Utah	E									X								
Virginia		L										X						
Vermont		E													X			
Washington	E												X					
West Virginia				E											X			
Wisconsin								E										
Wyoming				E								X						
Totals	10	5	5	8	0	10	5	5	3	2	2	5	9	2	8	8	3	2

L denotes testing was mandated by the state legislature, E denotes testing was mandated by the state board of education, X denotes first year of scheduled or actual implementation.

Note—Alaska and Iowa have not adopted and are not in the process of adopting some form of teacher testing program as of April 1987.

Table 3. Internship and Mentor Teacher Programs April 1987

States with existing internship programs using classroom observation instruments	States with support programs for beginning teachers, either planned, existing, or under study	States considering implementing formal observation systems
Florida	Arkansas	Arizona
Georgia	California	Connecticut
Kentucky	Colorado	Delaware
North Carolina	District of Columbia	Kansas
Oklahoma	Hawaii	Maryland
South Carolina	Maine	Massachusetts
Virginia	Missouri	Minnesota
	Nebraska	Mississippi
	New Hampshire	Nevada
	New Mexico	New York
	North Dakota	Pennsylvania
	Ohio	Rhode Island
	Oregon	South Dakota
	Tennessee	Texas
	Utah	Vermont
	Washington	West Virginia
		Wyoming
7 States	15 States and the District of Columbia	17 States

During the first year of employment, the beginning teacher serves under the guidance and assistance of an experienced teacher, an administrator, and a faculty member from a college of education. This committee is charged with the responsibility of providing assistance to the intern throughout the first year. At the end of the year, the committee recommends to the State Board of Education whether the intern should be certified.

Interest in this area is mounting. As shown in table 3, seven states have implemented formal internship programs using observation instruments. Another 32 states are either implementing or studying programs for beginning teachers.

Summary

1. The teacher testing movement grew with the educational reform movement, responding to a perceived, growing lack of public confidence in teachers and teaching.

2. The teacher certification movement had its origins in the South, spreading from Georgia, Louisiana, and Florida to the West and Northeast.

3. Early state entries into teacher testing were usually the results of legislative mandates, whereas later entries were typically mandated by state boards of education. Most are now mandated by state boards of education.

4. A requirement for an internship or beginning teacher program is a recent development that is being considered or implemented in 39 states. Seven states are currently using formal observation systems.

Notes:

1. Koretz, D., *Trends in Educational Achievement*, Washington, DC: Congressional Budget Office, Congress of the United States, April 1986.

2. Pipho, C., "Minimum Competency Testing in 1978: A Look at State Standards," *Phi Delta Kappan*, May 1978, 585.

3. Gallup, A., "The Gallup Poll of the Public's Attitude Toward the Public Schools," *Phi Delta Kappan*, October 1976, 190.

4. Cole, R. W., *Phi Delta Kappan*, editorial, December 1979, 233.

5. "Staffing of the Nation's Schools: A National Emergency," a report from the Council of Chief State School Officers *Ad Hoc* Committee on Teacher Certification, Preparation and Accreditation, Washington, DC, January 1984.

6. National Education Association. "Excellence in Our Schools—Teacher Education: An Action Plan," Washington, DC 1982.

7. The National Commission on Excellence in Education, *A Nation At Risk*, U.S. Department of Education, Washington, DC, 1983, 22.

8. Carpenter, J.A. "A Survey of the Criteria for the Selection of Undergraduate Candidates for Admission to Teacher Training," Western Kentucky University Press, Bowling, Kentucky, 1973.

9. Brubacher, H. A. and D.C. Patton, "Selection and Retention in Teacher Education: Does It Exist?" *Teacher Education*, 10:2-7, 1975.

Legal Considerations

What legal precedents have been set?
What are the implications of these precedents?

The wave of state-level teacher testing programs has been accompanied by legal challenges to employment decisions predicated on the results of this testing. This section provides a brief overview of litigation involving claims that teacher testing programs violate rights protected by constitutional or statutory provisions.

Equal Protection under the Fourteenth Amendment

Employment tests are frequently accused of being discriminatory because a disproportionate percentage of minority examinees perform poorly. This has resulted in claims that certain tests are biased. The use of these tests as a prerequisite to public employment has been challenged on the basis of the equal protection clause of the Fourteenth Amendment that prohibits states from denying citizens equal protection.

In the early 1970's, some individuals successfully challenged employment testing programs in school districts where the tests were used to perpetuate racial discrimination.[1] For example, in *Baker v. Columbus (MI) Municipal Separate School District*, the Fifth Circuit Court of Appeals affirmed the trial court's conclusion that the school district was intentionally assuring an all white teaching staff through its teacher certification examination program.[2] The court enjoined the school district from using test scores from the National Teacher Examinations for hiring or re-employment purposes.

The Supreme Court has rejected such equal protection claims, however, if it can be shown that the use of the test is rationally related to a legitimate employment objective and not accompanied by a discriminatory motive. In the leading case, *Washington v. Davis*, the 1976 Supreme Court endorsed the use of a written skills test as an entrance requirement for the Washington, DC police training program, even though the test disqualified a disproportionate number of black applicants.[3] The Court reasoned that the test was directly related to the requirements of the training program and was not administered for discriminatory reasons.

More recently, the Supreme Court affirmed a lower court's conclusion that South Carolina's use of the National Teacher Examinations for teacher certification and salary purposes satisfied fourteenth amendment equal protection guarantees since the test had a rational relationship to the legitimate purpose of improving the effectiveness of the state's teaching force and was not administered with discriminatory intent.[4] The trial court was satisfied that the test was valid in that it measured knowledge of the course content in teacher preparation programs and was justified by the legitimate employment objective of encouraging teachers to upgrade their skills.

In 1986, the Fifth Circuit Court of Appeals also overturned a preliminary injunction against using a basic skills test as a prerequisite to enrollment in teacher education programs in Texas.[5] The court reasoned that a state is not obligated to educate or certify teachers who cannot pass a valid test of basic skills necessary for professional training. Noting that the state presented considerable evidence to establish the test's validity, the court concluded that the plaintiffs would have to prove intentional discrimination to substantiate a violation of the equal protection clause.

Another clause of the fourteenth amendment guarantees the right to due process if governmental action impairs life, liberty, or property rights. Students have successfully relied on due process guarantees in asserting that they have a property interest in receiving a high school diploma. Thus, when tests are used as a diploma sanction, students are entitled to sufficient notice of the requirement, adequate preparation, and fundamentally fair examinations.[6] Relying on precedents established in these cases involving student proficiency testing programs, employees may assert that they have due process rights to proper notice and fair tests. Employees, however, may find it more difficult to establish that testing programs implicate a property interest that is a legitimate entitlement to employment.

This section was written by Martha M. McCarthy, Indiana University. A shorter version of this manuscript appeared in *Educational Horizons*, 65, 2, 1987. This version appears here with the permission of Pi Lambda Theta, national honor and professional association in education.

Title VII of the Civil Rights Act of 1964

Title VII prohibits employment discrimination on the basis of race, color, religion, sex, or national origin. The law applies to public or private employers with 15 or more employees, employment agencies, and labor organizations.[7] Where facially neutral requirements, such as a test, have a disparate impact on a group protected by Title VII, the employer must establish a business necessity for the challenged practice.

In *Griggs v. Duke Power Company,* the Supreme Court found that the use of a test of general intelligence as a prerequisite to employment violated Title VII because the requirement disproportionately eliminated minorities and was not proven to be a business necessity. In this 1971 case, the Court did not prohibit the use of tests per se as a prerequisite to employment, but concluded that the employer must substantiate that tests used as a condition of employment are related to job performance in order to satisfy Title VII.[8]

In several subsequent decisions, the Supreme Court has elaborated on the business necessity standard under Title VII. In 1975, the Court recognized that Title VII requires an employment test to be validated for the specific jobs for which it is used. The Court further held that if supervisor rankings are compared with employees' test scores in validating a test, there must be clear job performance criteria applied by all supervisors.[9]

More recently, the Court found that a Title VII violation can be established if employment tests have a disparate impact on minorities and are not substantiated as job related even though the "bottom line" of the hiring or promotion process results in an appropriate racial balance.[10] The court also affirmed the Second Circuit Appellate Court's conclusion that a city's practice of conditioning employment eligibility on tests, which had not been validated as job related and had a disparate impact on blacks and Hispanics, constituted a continuing policy of discrimination under Title VII that ended only when the last person was hired off the eligibility list based on test scores.[11]

In 1978, the Equal Employment Opportunity Commission (EEOC) issued *Uniform Guidelines on Employee Selection Procedures* designed to assure that employment practices with an adverse impact on a group protected by Title VII are justified by a business necessity.[12] Under the *Guidelines,* employment tests are expected be 1) reliable in that the measurement instrument is accurate and provides dependable data, and 2) valid in that the instrument actually measures what it purports to measure. The EEOC prefers test validation by correlating job performance with test scores but will allow other validation methods that satisfy professionally recognized standards.

In several school cases, courts have relied on Title VII and the EEOC Guidelines in concluding that specific tests with an adverse racial impact cannot be used in making employment decisions without proof of their business necessity. The use of examinations for supervisory positions in the New York City School District, for example, was found to violate Title VII because the test had a disparate impact on minorities and was not empirically substantiated as job related.[13]

The need for proper validation and documentation to satisfy Title VII has been frequently underscored by the courts. In 1974, the Fourth Circuit Court of Appeals ordered the reinstatement of teachers in Nansemond County, Virginia who were discharged due to the district's testing program.[14] The court stated its opinion that the passing score was arbitrarily chosen.

More recently, a federal district court granted a preliminary injunction against the Mobile Alabama School Board's use of the National Teacher Examinations to determine whether to retain nontenured teachers.[15] The court found that the test used in hiring and retaining teachers had a disparate racial impact and had not been properly validated. No evidence was presented to substantiate that those with higher scores performed better than those with lower scores.

Although aggrieved employees have a greater likelihood of prevailing when challenging tests under Title VII than under the equal protection clause, an employer's burden of establishing a business necessity for policies with a disparate racial impact is not impossible to satisfy. In the South Carolina case discussed previously, the Supreme Court affirmed the trial court's holding that Title VII as well as the equal protection clause did not preclude the use of the National Teacher Examinations to further the legitimate objective of assuring more competent teachers.[16] Subsequently, the Fourth Circuit Court of Appeals found no constitutional or Title VII violation in connection with a school district's use of certification levels based on scores on the National Teacher Examinations to determine teachers' salaries.[17] The court reasoned that the practice was justified by the job necessity of attracting the best qualified teachers and encouraging self-improvement among the low-rated instructional personnel.

State Laws

Most legal challenges to teacher testing programs have been based on constitutional or Title VII grounds, but state-mandated testing programs to determine eligibility for recertification and job retention have been challenged under state law. To date, these challenges have not been successful.

A Texas court upheld the use of a test that teachers and administrators had to pass to retain their jobs.[18] The court rejected the claim of the teachers' association that certification constitutes a contract, protected by the state constitution, that had been breached by imposing a testing requirement as a condition of retaining certification.

Similarly, an Arkansas court upheld a state law requiring all certified educational personnel employed in 1984 to pass a test of functional academic skills as a prerequisite to recertification. The court was not persuaded that the law was facially discriminatory because it applied only to employees on the job during one school year or that it created an arbitrary classification among employees with different expiration dates for their 10-year certificates.[19]

Summary

Significant precedents have been established in the area of employment testing in general and teacher testing in particular. Employment testing programs that have survived legal and constitutional scrutiny have tended to have certain characteristics:

1. They have been shown to be job related and to serve legitimate objectives.
2. They have been constructed by qualified professionals using generally accepted procedures.
3. They have been validated for the specific job for which they are used with procedures found acceptable by the courts.
4. They have provided adequate notice of the test requirements.

Notes:

1. See *Armstead v. Starkville Mun Separate School District*, 461 F. 2d 276 (5th Cir. 1972); *Georgia Association of Educators v. Nix*, 407 F. Supp. 1102 (N.D. Ga. 1976).

2. 329 F. Supp. 706 (N.D. Miss. 1971), *aff'd* 462 F. 2d 1112 (5th Cir. 1972).

3. *Washington v. Davis*, 426 U.S. 229 (1976). This case was actually brought under the fifth amendment, rather than the fourteenth, because the latter provision applies only to state action. Although the fifth amendment does not include an equal protection clause, the Supreme Court has interpreted its due process clause as prohibiting the federal government from denying citizens equal protection. See *Bolling v. Sharpe*, 347 U.S. 497 (1954).

4. *National Education Association v. South Carolina*, 445 F. Supp. 1094 (DSC. 1977), *aff'd*, 434 U.S. 1026 (1978). See also *Moore v. Tangipahoa Parish School District*, 594 F 2d 489 (5th Cir. 1979).

5. *United States v. Lulac*, 628 F Supp. 304 (E.D. Tex. 1985), *rev'd*, 793 F.2d 636 (5th Cir. 1986).

6. See *Debra P. v. Turlington*, 644 F.2d 397 (5th Cir. 1981) *on remand*, 564 F. Supp. 177 (M.D. Fla. 1983), *aff'd*, 730 F. 2d 1405 (11th Cir. 1984).

7. 42 U.S.C. 2000-e et seq.

8. 401 U.S. 424 (1971).

9. *Albemarle Paper Company v. Moody*, 422 U.S. 405, 432 (1975).

10. *Connecticut v. Teal*, 457 US 440 (1982).

11. *Guardians Association v. Civil Service Commission of the City of New York*, 633 F. 2d 232 (2d Cir. 1982), *aff'd*, 463 U.S. 582 (1983). Individuals who had suffered from the discriminatory hiring practice since the effective date of Title VII were awarded back pay and retroactive seniority.

12. 29 C.F.R. 1607 et seq.

13. *Chance v. Board of Examiners*, 458 F. 2d 1167 (2d Cir. 1972). See also *Walston v. School Board of Suffolk*, 566 F. 2d 1201 (4th Cir. 1977).

14. *Walston v. County School Board of Nansemond County, Virginia*, 492 F. 2d 919 (4th Cir. 1973).

15. *York v. Alabama State Board of Education*, 581 F. Supp. 779 (M.D. Ala. 1983). Subsequently, the court approved a consent decree enjoining the school board from ever using any examination in employment decisions if the exam has an adverse racial impact and has not been properly validated. *York v. Alabama State Board of Education*, 631 F. Supp 78 (M.D. Ala. 1986). See also *Ensley Branch, NAACP v. Seibels*, 616 F.2d 812 (5th Cir. 1980), *cert. denied*, 449 U.S. 1061 (1980); *Allen v. Alabama State Board of Education*, 612 F. Supp. 1046 (M.D. Ala. 1985).

16. *National Education Association v. South Carolina*, 445 F. Supp. 1094 (D. S.C. 1977), *aff'd*, 434 U.S. 1026 (1978).

17. *Newman v. Crews*, 651 F.2d 222 (4th Cir. 1981).

18. *Texas State Teachers' Association v. State of Texas*, 711 S.W. 2d 421 (Tex. App. 1986). See also *Alba v. Los Angeles Unified School District*, 189 Cal. Rptr. 897 (Cal. App. 1983).

19. The complaint also alleged that the Arkansas Attorney General and State Department of Education had issued conflicting interpretations of the application of the law to individuals holding multiple certification, *Stanfield v. Turnbow*, Chancery Ct., Pulaski County, Arkansas, March 22, 1985.

Excellence and Equity

What has been the impact of teacher tests on minority groups? Should teacher tests be required for minority group members? What are some policy options?

The use of tests to promote excellence among teachers is challenging an important societal goal: equity. With the implementation of teacher testing programs, there has been a drop in the supply of talented, well-educated minority teachers. As a result, a host of philosophical and practical issues has emerged which must be addressed every time teacher testing is discussed or considered.

After describing the impact teacher testing has on minority groups, this section outlines an argument in favor of testing minority candidates and policies that can promote both excellence and equity.

The Impact of Testing on Minorities

With greater reliance on both student and teacher testing, the longstanding controversy surrounding use of standardized examinations has intensified. Among the most reluctant to sanction widespread use of standardized tests are individuals and groups concerned about the disparate impact of the examinations on prospective teachers from minority backgrounds.

According to the Commission on Teacher Credentialing, of 6,644 minority candidates in California who took the first CBEST examination in 1983, 3,854, or 58 percent, failed. The highest failure rate was among Blacks. Of the 2,040 Blacks who took the test, only 530 were able to proceed with their plans to become teachers, a paltry 26 percent. For other minority groups, the test results were not much better. Only 39 percent (834) of 2,133 Mexican Americans passed and only 50 percent (637) of 1,259 Asian Americans passed the CBEST examination. In comparison, the pass rate for Whites was 76 percent, with 18,856 of the 24,540 Whites passing.[1]

The pass rates elsewhere are no more encouraging. Of a total of 5,500 teachers certified in Florida in 1981, only 200 were Black. This low number was mirrored in the pass rates on Florida's Teacher Competency Examination, given for the first time in 1983. While 90 percent of White candidates passed the examination, only 35 percent of Black candidates, 51 percent of Hispanic candidates, and 63 percent of Asian candidates passed.[2]

The first administration of the Texas testing program for prospective teachers eliminated 84 percent of the Black candidates and 65 percent of the Hispanic candidates on the basis of the mathematics examination. At the same time, 87 percent of the Black candidates and 65 percent of the Hispanic candidates failed the reading test, and 80 percent of the Black candidates and 56 percent of the Hispanic candidates failed the writing test.[3]

The problems associated with these high minority failure rates are made all the more serious by the increasing need for qualified Black, Hispanic, and Asian American teachers at a time of rapid demographic change. California data illustrate the national trend. In the 1984-85 school year, the state's total public-school population was 53.1 percent non-Hispanic White, 27.9 percent Hispanic, 9.7 percent Black, 8.5 percent Asian or Pacific Islander, and 0.8 percent American Indian.[4] It is projected that more than 50 percent of the state's total public school population will be non-White by 1995. If California's public schools indeed become more than 50 percent non-White, they will join the schools in the nation's thirty-five largest city school districts, the majority of which now have overwhelmingly minority-student enrollments. Needless to say, the combination of high minority failure rates on teacher examinations and high minority pupil enrollment rates, if unchecked by dramatic interventions, could result in a high degree of tension between minority parents and a largely non-minority teaching staff. A conflict between communities and schools, similar to that which plagued public education during the 1960s in many of the nation's major urban areas, could ensue.

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The rates of failure on teacher examinations reflect two ominous trends. First, interest in teaching on the part of many well-educated students, especially talented minority students, has declined precipitously in the last fifteen years. As the teacher surplus of the 1970s drastically reduced job opportunities, college students increasingly chose other majors. Moreover, as new career opportunities outside education have opened up for them, the best and brightest minority and women students, who earlier might have entered teaching, have chosen other fields. The proportion of college-bound students who indicated plans to major in education fell from 24 percent in 1969 to less than 5 percent in 1982. The decline has been particularly evident among highly qualified minorities and women.

Second, colleges and universities are failing to guarantee that their graduates, both minority and non-minority, can read with comprehension, write literately, and perform routine mathematical computations. This trend is but an overt manifestation of the general failure of many colleges and universities to exercise proper leadership and authority over their educational programs. The Association of American Colleges, in its report entitled "Integrity in the College Curriculum," maintains that decline and devaluation are evident everywhere. Moreover, the report states,

> . . . there is so much confusion as to the mission of the American college and university that it is no longer possible to be sure why a student should take a particular program of courses. Is the curriculum an invitation to philosophic and intellectual growth or a quick exposure to the skills of a particular vocation? Or is it both? Certainty on such matters disappeared under the impact of new knowledge and electives in the late nineteenth century. The subsequent collapse of structure and control in the course of study has invited the intrusion of programs of ephemeral knowledge developed without concern for the criteria of self-discovery, critical thinking, and exploration of values that were for so long central to the baccalaureate years. The curriculum has given way to a marketplace philosophy: it is a supermarket where students are shoppers and professors are merchants of learning. Fads and fashions, the demands of popularity and success, enter where wisdom and experience should prevail. Does it make sense for a college to offer a thousand courses to a student who will only take 36?
>
> The marketplace philosophy refuses to establish common expectations and norms. Another victim of this posture of irresponsibility is the general education of the American college undergraduate, the institutional course requirements outside the major. They lack a rationale and cohesion or, even worse, are almost lacking altogether. Electives are being used to fatten majors and diminish breadth. It is as if no one cared, so long as the store stays open.[5]

If this trend persists—and make no mistake about it, it will as long as colleges and universities, ignoring the implications of the findings contained in the report, continue to permit unknowledgeable students to chart their own intellectual development—the situation will only deteriorate further. Unaided by the collective intelligence of the academic community and lacking a commitment by higher-education institutions to the improvement of the attractiveness of the teaching profession, the supply of talented, well-educated minority teachers will continue to nose-dive.

In Florida, where applicants for teacher-training programs must score a minimum of 835 on the Scholastic Aptitude Test (SAT), Professor Walter A. Mercer of Florida Agricultural and Mechanical University, a historically Black college supported by the state, predicts that "future teachers from (minority) groups could become vanishing breeds."[6] In Texas, where candidates for certification must pass reading, writing, and mathematics tests, researchers estimate that by 1988, 96 percent of Black candidates and 84 percent of Hispanic candidates will be denied permission to teach on the basis of their reading tests alone. They also project that minority representation in the national teaching force could be reduced to less than 5 percent by 1990 if the currently observable trend in pass rates continues unabated and if rates of attrition through retirements and teacher burnout are unchanged.[7]

These figures are both disturbing and unacceptable. They have a devastating effect on young adults who have a strong desire to build a career for themselves by educating our children. Their impact is also to deny minority groups access to exemplars of success. Moreover, there is the awful possibility that minority youth, upon learning that many prospective minority teachers are judged not good enough to teach, will lose confidence in their own abilities and conclude that higher education is off limits to them.

The first reaction of many to the apparent negative relationship between testing and the potential supply of minority teachers is to claim "racism" and to insist that alternate certification standards be adopted for minority candidates. Certainly, if the implication of this connection is ignored, there is the real possibility that the promise of democracy and the promise of equality will be placed, yet again, in deep jeopardy. The question remains whether this prospect necessarily rules out the use of proficiency tests.

In Favor of Competency Testing of Minority Candidates

Many insights into the need for proficiency testing are gained by analyzing the analogous arguments advanced by sociologist Harry Edwards of the University of California, Berkeley, regarding Rule 48 of the National Collegiate Athletic

Association (NCAA). The passage of this rule sparked "what is probably the most heated race-related controversy within the NCAA since the onset of widespread racial integration in major college sports programs during the 1950s and 1960s."[8] Effective in 1986, the rule requires freshmen who want to participate in sports at any of the nation's 277 Division I college and universities to have attained a minimum combined SAT score of 700 or a composite score of 15 on the American College Test (ACT) examination. In addition, they must have achieved a C average in eleven specific high-school courses, including English, mathematics, social sciences, and physical sciences.[9]

The response of many Black educators to Rule 48 was sharp and immediate. Some were angered because they were not consulted in the formulation of the new policy; others claimed that the SAT minimum score was set arbitrarily. Still others stated that the SAT and the ACT are racist diagnostic tests, biased in favor of White students, and that the proposed cutoffs impose unfair penalties on Black athletes.[10]

In contrast, Edwards took a stand in support of the enforcement of Rule 48. He agreed that the determination of the cutoff scores may well have been arbitrary, but found them so arbitrarily low as to constitute no standard at all. Edwards stated:

> Further, were I not to support Rule 48, I would risk communicating to Black youth in particular that I, a nationally known Black educator, do not believe that they have the capacity to achieve a 700 score on the SAT, with three years to prepare for the test, when they are given a total of 400 points simply for answering a single question in each of the two sections of the test, and when they have a significant chance of scoring 460 by a purely random marking of the test. Finally, I support the NCAA's action because I believe that Black parents, Black educators and the Black community must insist that Black children be taught and they learn whatever subject matter is necessary to excel on diagnostic and all other skills tests.[11]

The argument of Edwards is both compelling and persuasive. However, it is also incomplete. It is clear that if Edwards' view is to be translated into policy, support of minimum-competency rules must be coupled with insistence that minority children receive a sufficiently high-quality education necessary to enable them to score competitively on examinations from SAT to CBEST to NTE. It is also clear that state public officials, in and out of the education establishment, must commit themselves to develop, fund, vigorously monitor, and intelligently evaluate targeted school-improvement programs so that minority students at all levels can become more competitive on all examinations of scholastic achievement.

This position does not assume that standardized examinations are problem-free or totally unbiased. Clearly, there is no evidence that the teacher tests currently being used have predictive validity.[12] They do not discriminate between those who will become effective or ineffective teachers. Some individuals who pass the tests will indeed become incompetent teachers. This caveat must be brought to the forefront of policy discussions concerning teacher testing.

There is also evidence that current tests are lacking in content validity. The present NTE Core Battery, for example, was designed by the Educational Testing Service (ETS) with the assistance of panels of teacher educators and teaching practitioners who were asked to judge the face validity of the test items.[13] While ETS adhered to strict standards of test quality and fairness and asked independent groups, including the NEA and the AFT, to select multiracial panel members, there are two main problems with this approach.

First, the Core Battery is purported to represent a consensus among educators as to the knowledge important to an entry level teacher.[14] However, in fact, there is little agreement among practitioners and researchers as to what beginning teachers need to know. The judgments of ETS panelists about test-item validity may therefore have been situational, subjective, and idiosyncratic. In implicit recognition of this probability, ETS requires each state that chooses to administer the NTE to conduct its own content-validity study. However, this policy does not increase confidence in the NTE's validity. Using the same basic methodology described above, ETS itself has conducted 60 percent (21) of the state studies.[15] While as many as 38 percent of the test items have been identified as invalid for a given state,[16] the NTE has not been modified accordingly, but continues to be administered as originally designed.

Second, the content of the Core Battery appears to be more closely related to the curricula of teacher-preparation programs than to the competency of effective beginning teachers. According to ETS, the tests "were developed to provide information about a candidate's knowledge and skills, typically acquired through a teacher-training program."[17] Especially in light of the manifest need to reform teacher-education programs, it cannot be assumed that the objects and content of teacher-training curricula reflect the proficiency areas or levels possessed by capable entry-level teachers. That this concern has substance is supported by ETS's recent undertaking of a job analysis study involving 16,000 practicing teachers.[18] Presumably, the results will be used to increase the job relatedness of the NTE.

David Owen, in his 1985 critique of the ETS, suggests that the present NTE's lack of relevance to the workplace constitutes grounds for the abandonment of the examination. Since the Pre-Professional Skills Test seems to be an abbreviated version of the NTE, he advises states to avoid this examination as well. Owen further asserts that the quality of the teaching profession is in fact reduced by the NTE, in that its relationship to teacher-training curricula reinforces the mediocrity of such programs. He states that the "easiest way to improve on the NTE would be to get rid of it."[19]

However, this is a simplistic and unrealistic response to a complicated issue. Tests that do have content validity and that are properly used can perform a useful function in assessing teacher competency. The development of better tests, then, is the appropriate public-policy priority.

In addition to validity issues, some teacher tests have been questioned on the basis of potential bias in favor of or against particular groups—racial, socioeconomic, and other. Bias can be difficult to substantiate, and the elimination of test bias can be equally problematic.

In 1981, for example, a class-action suit was filed against the Alabama State Board of Education on the grounds that the state's teacher-competency testing program discriminated against Blacks and violated their constitutional and statutory civil rights.[20] One provision of the multifaceted consent decree in favor of the plaintiffs required the state to delete test questions that showed Black/White performance differentials of more than 15 percent.[21] If implemented, this remedy might have resulted in the deletion of a large number of test items, an action that would have removed race bias while simultaneously distorting the job relatedness of the testing program. Since the job relatedness of the test appears to have been carefully established—the test developer, National Evaluation Systems, Inc., consulted more than 5,000 Alabama teachers—the net gain to the plaintiffs on the issue of test revision might have been minimal. This dilemma may have been a factor in the presiding judge's decision to vacate the consent decree in February 1986.

The case for the class bias of some of the currently used tests is less clouded. Allan Nairn says of the SAT, "In sum, it is advertised as a test of scholastic aptitude . . . used by colleges to accept and reject applicants ostensibly on the basis of merit. For many students, the SAT may be more a reflection of their social class than of their potential for accomplishment inside or beyond the classroom."[22] Mary Frances Berry furthers this argument with her assertion that the major differential among SAT test scores is "not between Black and White students, but between students from well-off families and students from poor families. The better off the family, the higher the score—for Whites and Blacks." Indeed, the College Board's report, *Profiles of College Bound Seniors: 1983*[24] shows exactly that. The relationship between family income and SAT test scores is highly significant. While not as high, the relationship between level of parental education and SAT scores of high-school seniors is also very substantial.

On the question of test fairness, Banesh Hoffman goes even further in maintaining that the SAT is biased against everyone with a penetrating mind. Of the SAT's multiple-choice format, he observes:

> How genuinely difficult, how worthy of first-rate minds, can questions be for which answers must be picked at the rate of one every minute or so, or in some cases, at the rate of a hundred an hour? How deeply can such questions probe and still be machine-gradable? And if the questions did indeed have depth, how could one reasonably expect the candidates to give well-considered responses to them so quickly? Is it likely that students who can maintain a lively interest in long successions of small, efficient conundrums are those with deep minds, or even those with an adult set of values?[25]

From Analysis to Policy

Clearly, there must be vigilance in insuring the proper use of standardized tests in assessing the competency of potential teachers. The testing industry must be persuaded to revise and design tests that are both unbiased and valid. Where necessary, legal action should be strongly considered as an avenue for test reform and policy change. There must also be full understanding of what standardized tests can and cannot do. To quote *Washington Post* columnist William Raspberry, standardized tests cannot

> . . . measure patience, love of children and learning, the ability to maintain order and a hundred other things that make up teacher competency. But the tests can measure whether a teacher has learned the basics of pedagogic techniques (which we consider important, else why would we mandate education courses for teachers?) and whether a teacher has a solid grasp of the material to be taught . . . .[26]

Raspberry's view is strongly endorsed. While tests cannot be relied upon to identify who has the personal warmth, empathy, drive, and dedication required of a good teacher,they can provide some reliable information about the basic competencies of a pool of applicants. Further, more than measuring potential aptitude, good standardized tests indicate what students have learned; they also show how well students are able to apply their learning to what the tests ask of them.

The question remains, however, how do we break the cycle of minority failure on teacher tests? Again, William Raspberry has insight into the crux of the problem: ". . . the reason minority applicants fare worse on the tests than Whites is that they themselves are victims of inferior schooling."[27] Therefore, what teacher-test results indicate is that the education of our children, especially those from minority and low-income families, must be improved. Rejecting what Arnold M. Gallegos, dean of the college of education at Northern Arizona University, correctly describes as our historical tendency to "blame the victims" for their failure on examinations,[28] we must focus on the reform of the educational institutions that prepare our students.

A priority in this effort is to increase the financial allocations made to colleges and schools of education. An underlying cause of the low minority pass rates on teacher-competency tests are inequities in the resources devoted to teacher-training institutions, particularly historically Black colleges. *Ipso facto*, resource-poor teacher colleges and schools of education, no matter how high the innate ability of their students, are at a disadvantage to provide the breadth, intensity, and level of education needed by future teachers. If higher-education institutions are strengthened, then the skills and knowledge of future teachers will be advanced.

In California, the most recent pass rates on the CBEST augur well for the potential benefits of maintaining minimum teacher-competency standards while focusing on educational reform. In 1985, 33 percent of Black examinees passed the test, a figure seven percent higher than the 1983 number cited earlier. Among Mexican Americans, the pass rate was 46 percent, also a seven percent improvement. Representing a six percent increase, 56 percent of Asian Americans met minimum competency standards. Among Whites, 81 percent passed, five percent more than in 1983.[29] These figures suggest that higher-education institutions and teacher candidates have recognized the implications of past CBEST scores, conducted self-evaluations, and made decisions that have led to development of higher-quality programs and students.

If note is taken of Henry Levin's provocative finding that each additional point scored by teachers on the SAT verbal subtest can be translated into a net gain of .175 points on the verbal scores of Black students and .179 on the verbal scores of White students,[30] then there is even more impetus to provide educational settings that will give all students the same chance at passing teacher credentialing examinations, regardless of their ethnic or socioeconomic backgrounds.

Direct action must be taken to provide all students in our public schools with quality education that is responsive to their real needs. This effort depends on the existence of well- qualified teachers, including well-qualified minority teachers. To meet this challenge, while also maintaining and improving standards of excellence, the pool of qualified minority teachers must be enlarged.

All of the knowledge and skills that are tested in competency examinations are learnable. Students can achieve acceptable test scores if they are taught what they need to know. This means that they must be taught all of the skills and understanding that they will need to function well in the contemporary world and to be prepared to make the best adaptations and choices in their lives as they move into the future.

Toward this end, a comprehensive proposal is offered. While it will bring a transitional period of short-run disappointment for some who will be locked out of the teacher-training programs they wish to enter, the plan will finally put a stop to "victim- blaming" measures that have created more problems each time they have been applied in place of long-range, well-articulated solutions. The proposal consists of three steps: the early recruitment and intensive training of minority and low-income students who have a commitment to teaching, the implementation of improved teacher selection policies, and the identification and reward of outstanding teachers.

Step One: The Early Recruitment and Intensive Training of Minority and Low-Income Students Who Wish to Teach

As early as high school, students who have expressed interest in teaching as a career would be selected to participate in a special, university, preprofessional, teacher-preparation program. The program would consist of a five-year course of study leading to the bachelor's degree and would provide a series of paid school-year and summer teaching-related internships. In addition to the traditional criteria of grades and past achievements, program admission standards would consider potential for growth and willingness to learn. Special efforts would be made to attract students with a background or interest in areas of special need, such as mathematics and science or language and literacy.

Upon entry into the program, optimally with entry into college, students would be given a series of criterion-referenced tests for diagnostic purposes. In conjunction with their regular course load, the students would be enrolled in a series of self-paced tutorials to work on development of basic skills in those areas where their diagnostic tests indicate attention is needed. These tutorials would be an integral part of a substantive undergraduate liberal arts program. They would be designed to eliminate troublesome conditions such as those identified in Stanley Ivie's analysis of Black student achievement on the NTE.[31]

Ivie notes that Black students perform poorly on the NTE because the examination is as much a reading test as a subject-matter test. Consequently, many Black students cannot perform well on the test because they do not have adequate reading skills. Ivie observes that most Black students have not "mastered the basics" prior to their entering college; moreover, colleges do little to correct the situation because of an insufficient emphasis on the teaching of writing and policies that allow students to avoid liberal arts courses that have substance or rigor.[32] Given such circumstances, it is sadly understandable why tests taken at the end of college too often show poor results.

In response to these needs, the proposed developmental program would focus at the undergraduate level on reading skills, basic mathematics operations, with heavy emphasis on reasoning skills, manipulations, application, and good, clear writing. Since the students would at the same time be enrolled in subject-matter courses that require these skills, they would have sufficient opportunities to practice the developing skills and to receive continuous feedback as they utilize new skills in their course work. At the end of two years, the students would take a series of tests to measure their growth. A new set of self-paced tutorials, based upon their current skill levels, would be developed and the process would be repeated on a higher level. The students would also take practice versions of the required teacher-licensing examinations.

The licensing tests themselves should not be used as diagnostic tools. There have been problems in using the CBEST for this purpose. Richard Watkins, CBEST consultant to the California Commission on Teacher Credentialing, notes that far greater demands are made on a test to be used for diagnosis than for determining proficiency, since a diagnostic test must "yield reliable measurement over a continuum of skill or ability and provide reliable scores on several reasonably different skills and subskills." Watkins cautions that tests such as the CBEST can only make the most general predictions about outcomes and cannot be used for prescription on the basis of their results alone.[33] This explains the lack of success for those who have failed the CBEST and attempt to use their test results as a basis of preparation for reexamination. The candidates who have done this have been frustrated and angered by their lack of progress. The approach recommended above would avoid this situation by providing accurate diagnostic tools combined with practice on the actual test to gain familiarity with and confidence in standardized test taking.

Upon satisfactory completion of the undergraduate program and the conferral of the bachelor's degree, students would be guaranteed admission to participating colleges and universities (for example, the California State University's teacher-education programs or the University of California's graduate schools of education). Graduate scholarships covering the full costs of student fees and filing expenses would be provided to all entering students with an undergraduate grade-point average of B + or better. Partial tuition scholarships would be available to those with a B average. The students would, of course, also have access to regular financial aid programs. Again, as in the first phase of this program, paid internships would be provided to all qualified students for the duration of their graduate teacher-training studies.

Given present realities, several things will have to be changed before we can proceed realistically with this program — and only one of them involves raising the competency level of future teachers. To attract and retain the best and brightest applicants, society must accord them the same status it gives to young professionals in other career fields. Only then will the public have the right to expect high-level professional performance and long-range staying power from them. In terms of the minority and low-income candidates who must be recruited, the polity will have to affirm its national commitment to quality education and underwrite, through Federal and state contributions, the creation of excellence. This would require incentives to potential teachers in the form of scholarships and loans with forgiveness provisions based upon number of years of service as a teacher. To attract good people, it is also necessary to make serious efforts to bring teaching salaries into the professional range. In California, this process has just begun. Many hope that it is not too little, too late.

Step Two: The Selection of Highly Qualified Teaching Professionals

Despite the current situation—that of being at the end of a period of an oversupply of teachers—teacher-personnel policies would be redesigned based upon the recommendations made in my report entitled, *Race, Ethnicity and Equal Employment Opportunity: An Investigation of Access to Employment and Assignment of Professional Personnel in New York City's Public Schools*.[34]

First, any existing "alternative" teacher-selection policies would be terminated. Although such programs may have been successful in increasing minority employment opportunities, they have operated as racial conduits, steering newly hired minority teachers into almost exclusively minority schools. Given minority teacher applicants who have undergone rigorous training, the rationale for alternative selection policies would disappear. There would be significant advances toward reversing the persistent pattern in which teachers with fewer years of experience, less advanced training, and lower salaries are assigned to schools with high proportions of minority and low-income pupils. As soon as these teachers gain enough seniority to do so, they move on to "better" schools populated with middle- and high-income students. This phenomenon would be offset by the development of systems of equal employment opportunity goals and plans that integrate school faculties and show all school children that both quality education and the achievement of high test scores are functions of many factors, but that group membership is no longer one of them.

Second, traditional systems for the selection and evaluation of new teachers would be replaced with ones that encourage personnel officials to match the needs of students in the public schools more closely with the talents of potential teachers in the applicant pool. The effectiveness of our school systems will not be found in the statistics on the racial composition of our teaching staffs, but rather in the statistics reflecting our students' mastery of basic skills in reading, writing, and arithmetic. Nevertheless, it must be understood that proportional minority participation in the career of teaching and high-quality outcomes in terms of student learning are not at odds with each other. There is no such thing as a choice between equity and excellence. There is no equity in the absence of excellence.

Step Three: Identifying and Rewarding Outstanding Teachers

In addition to existing teacher tests, a new one would be designed and implemented. This new test would be taken after a minimum of three years of practice in a full-time public-school teaching position. It would measure: (1) subject-matter competency; (2) knowledge of learning theory, that is, ability to diagnose accurately student needs in terms of skill level and social development and to match those needs with appropriate learning experiences, materials, and methods; (3) ability to monitor progress of students in a systematic way, utilizing several feedback mechanisms; (4) ability to create well-balanced lessons that vary activities and build progressively from facts to concepts to valuing and evaluating, thus giving students opportunities for and experiences in raising their thinking and reasoning skills; and (5) ability to evaluate accurately student progress in a manner that is consistent with stated goals and objectives and that involves students as active participants in the evaluation process.

Such a test would be to the field of teaching what the Certified Public Accountant (CPA) examination is to the field of accounting. As such, it would be entirely voluntary. Only those who wished to take the test for purposes of professional advancement would do so. It is also strongly recommended that the test be made optional on a nationwide basis. This would have the added benefit of opening up the job market for master-level teachers. Outstanding educators who find themselves in dead-end positions in their own school districts could seek advancement not only outside their district, but also outside their state. Such open competition would work for the benefit of all concerned. Areas experiencing growth would have an excellent pool from which to select, while teachers who are seeking advancement in their career goals would not have to leave teaching in order to progress professionally. These master-level teachers would be compensated accordingly, just as CPA-level accountants are.

Of course, individual states and local school districts could supplement the national examination with locally designed sections, reflecting state concerns and priorities. For example, a state with a large limited-English-speaking pupil population might want to emphasize the importance of having teachers with expertise in this area, while other states might emphasize other areas of great need.

In addition to promoting teacher professionalism by encouraging and rewarding teachers who have objectively demonstrated superior skills as educators, the introduction of a CPA-like examination for teachers would also place teachers and the general polity in a more strategically advantageous position to press colleges and universities to undertake reforms that would improve the educational enterprise at all levels. In particular, teachers and policy makers would have the leverage to persuade the higher education establishment to think more systematically about the process of teaching (knowledge transmission) and learning (knowledge acquisition) in particular disciplines.[35]

Traditionally, disciplinary departments, for example, departments of physics, English, and mathematics, have not directed many of their resources of energies toward the examination of how students learn specific subject matter, what difficulties they face in learning how to think abstractly, what preconceptions they bring with them to the classroom, what instructional approaches are most effective for particular types of students, and how best to take full advantage of the potential of computer-based, intelligent tutoring systems. The very promise of a CPA-like exam for teachers, covering what teachers should know about teaching and learning in particular subject areas, would vastly improve the linkages between teachers in the schools and teachers in colleges and universities. Here again, the report, "Integrity in the College Curriculum," speaks truth to established wisdom:

> If departments, particularly research departments, allocated one or two regular faculty positions to research on learning their discipline, they could produce results which would improve their own teaching effectiveness and would have visibility and impact beyond the walls of their own institutions. They would influence instructional materials at the secondary as well as the college level. And they could educate young researchers who would continue the enterprise and propagate it to institutions where it does not yet exist.[36]

Conclusion

During the transitional period toward the implementation of this proposal, presented above, there undoubtedly will be disappointment for those who fail teacher-competency tests. However, I believe that properly used, well-constructed, correctly standardized measures for prospective teachers are necessary for the development of the teaching profession and beneficial to the education of our young. If there is indeed a national commitment to quality education for all, as a part of our dedication to the principles of equality, then suggestions to change the requirements to fit the present median performance of minority teacher candidates will be ignored. Rather, the desired performance level will be retained, valid and unbiased tests will be developed, and minority students will be provided with the kinds of support and training that will make it possible for them to garner the learning and experience needed to pass the examinations for entry into and exit from teaching credential programs. The know-how to do all this exists; all that is needed is now affirmation of the belief that a quality system of education will be attained only when there is equality of outcome in basic skills across economic as well as racial lines.

Teaching—the transmission of thought from one mind to others, and traditions and values from one generation to the next—is one of the most important activities of the human race. It is the one skill whose absence prevents magnificent successes and guarantees startling failures. Without good teaching, genius is struck dumb, poverty is made permanent, power is likely to be brutal, and culture doomed to be channeled into mind-forged ruts. Lack of good teaching results in squabbling, atomistic tribes, each one pursuing narrow objectives, unable to identify with the aspirations of anyone outside of the group. Good teaching enables and ennobles, providing society with the tools necessary for self-perpetuation and self-renewal. To put forth the argument that low-income minority youngsters, the most disadvantaged of the poor and the last able to emancipate themselves from their impoverished surroundings, should be taught by our less-than-best teachers is to stand the idea of justice on its head. As admirable and important as is the goal of increasing the ranks of minority teachers, this objective must not be put before the more fundamental objective of securing good teaching for those who need it most.

Summary

1. *Concurrent with the implementation of teacher testing, there has been a decline in the number of minority group members seeking and obtaining an education degree. At a time when*

minority group populations are increasing, fewer talented minority group members are interested in teaching as a career.

2. ***Failure rates on teacher tests reflect two ominous trends. First, interest in teaching on the part of many well educated individuals, especially talented minority students, is waning. Second, colleges are failing to guarantee that their graduates possess basic literacy skills.***

3. ***While some advocate abolishing teacher tests, others, including the author of this chapter, advocate their continued use, coupled with appropriate educational opportunities.***

4. ***One approach to promoting both excellence and equity involves early recruitment and intensive training of minority and low-income students who wish to teach, the selection of highly qualified teaching professionals, and the identification and recognition of outstanding teachers.***

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Teacher Supply and Demand

Are there enough teachers today?
Should we expect teacher shortages in the near future?
What role has teacher supply and demand played regarding teacher certification testing?

If the question of teacher supply and demand were only one of cold numbers and warm bodies, there would be no issue. Each September, schools manage to find enough individuals to fill virtually all positions. At the beginning of the 1983 school year, only .1 percent of the teaching positions were unfilled.[1] The issue of supply and demand, however, is not just one of quantity. Parents, community leaders, policymakers and educators are concerned about the qualifications of those who currently fill the positions and those who will be filling vacancies in the future.

Teacher testing programs are viewed as a means of objectively assuring quality. They assure the public that new teachers possess the skills viewed by the state as crucial to teaching. Testing programs, however, also have the potential to affect teacher supply and demand. Passing scores can be lowered to increase teacher supply, or raised to limit it.

This section outlines national and state data concerning teacher supply and demand. The current situation with regard to shortages is explained, projections are made with regard to future demand, and teacher testing practices are discussed in light of current and future demand.

The Current Debate

The education community is debating whether conventional education institutions can continue to meet the demand for qualified new teachers. In 1985, the Center for Education Statistics (CES)[2] projected the number of new teachers that will be required until 1992 and the number of teacher education graduates expected over the next few years. Noting a large discrepancy between demand and this supply, shortages were predicted.[3]

The gloomy projections were affirmed in several quarters. In 1984, one study found that 41 states were reporting teacher shortages in either mathematics (31 states), science (35 states), special education (24 states), bilingual education (8 states), or industrial arts (19 states).[4] A major study of American teachers reported that an alarming 27 percent of our teachers were planning to leave the profession during the next 5 years.[5] Several school districts reported that they were mounting active teacher recruitment programs.[6]

Re-examining the data in 1986, an analyst at the Bureau of Labor Statistics questioned the projections and the assumptions behind them. He noted that for the next few years, teacher attrition rates would be comparable to that of other professions. There would not be a large exodus from the profession in the immediate future. He did note, however, that today's teachers are older and that there may be a great increase in demand starting in the mid-1990's.[7]

Other reports issued within the last year questioned whether the projected teacher crisis would materialize. The private National Center for Education Information (NCEI) conducted a 50-state survey and claimed that not only was supply keeping up with demand, but that quality was increasing. Large numbers of new teachers had graduated with honors. Scholastic Aptitude Test (SAT) scores for those planning to major in education had been increasing.[8]

Noting that many positions are being filled by older individuals re-entering the work force, the NCEI study raised some questions about projected shortages. Significant numbers of positions are being filled by individuals who have once taught, left for some reason, and are now returning to teaching. The CES projections did not consider this group in its projection of teacher supply.

CES also projected a continuing decrease in the supply of new teacher graduates. The American Council on Education (ACE), however, released a report in early January 1987 indicating a possible reversal in that trend. ACE noted that the number of college freshmen planning to become teachers had

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This section was written by Lawrence M. Rudner.

increased from 5 percent to 7 percent, an increase of almost 50 percent, since 1982.[9]

The debate has concentrated largely on the question of whether supply will be able to keep up with demand in the next few years. It has been noted that significant numbers of former teachers are rejoining the workforce and that an increasing number of people will be enrolling in teacher education programs. While these trends are encouraging, one does not know whether the numbers, and the quality behind the numbers, will continue to be sufficient to meet the demand, especially in the latter part of the next decade.

What Is a Teacher Shortage?

The issue of teacher supply and demand is best understood with local data concerning local schools and different teaching areas, *not data at the state and national level describing averages*. If one looks solely at the national averages, there are no teacher shortages. Between 1978 and 1982, teacher preparation programs graduated an estimated 130,000 more teachers than there were new positions. Virtually every vacant position is being filled.

A localized teacher shortage will exist when a district cannot find enough qualified applicants to fill vacant teaching positions. While a district may have enough applicants to adequately fill elementary school positions, it may not have enough to fill high school mathematics positions. In recent years, the supply of trained teachers in mathematics and science and in urban areas appears to be less than demand. The Southern Regional Education Board reports, for example, regional shortages in mathematics and science and predicts that these shortages will become more severe in the years ahead.[10] The 1985 Condition of Education Reports that teacher shortages are 4 times higher in urban areas than they are in other areas.[11]

Confronted with shortages, districts have several alternatives: increase class sizes, drop courses, reassign teachers from another field, and, on an emergency basis, hire individuals without appropriate training.

Teachers are typically certified to teach a particular high school subject, such as high school mathematics, or elementary school. Reassignment, or "misassignment" as it is often called, refers to using certified individuals to teach in fields other than the one for which they are certified. The amount of misassignment appears to be significant and growing.

Emergency certification is another option. All but two states issue substandard, limited, or emergency credentials to individuals who do not meet normal certification requirements. Half of these states can issue certificates to individuals with less than a bachelor's degree. In 1984, approximately 53,300 of the nation's 2,145,542 teachers held emergency credentials. The numbers ranged from 0 percent in many states to over 10 percent in other states.[12]

Projected Supply and Demand

Projected Demand

The total annual teacher demand is the number of individuals needed to fill classroom positions as a result of student enrollment, teachers retiring or otherwise leaving the profession, and changes in student-teacher ratios. These variables subsume a number of other developments, including changes in course offerings, attempts to reduce the number of misassigned teachers, changes in kindergarten and nursery school admission ages, increased enrollment in special education programs, reduction in the number of overcrowded classes, and changes in staffing patterns.

The first step in making a projection is to determine the number of additional students that will need to be served. This can be estimated from trends in student enrollment. As shown in figure 1, total enrollment in U.S. elementary and secondary schools declined from 1970 to 1982 by approximately 1 percent per year.

The declines between 1972 and 1982 were not consistent across the nation. Showing larger than average enrollment *decreases* during the period, Delaware, Florida, Kansas, Maine, Michigan, Montana, and South Dakota have witnessed a decade of reduced demand.[13] Some of these states were among the first to implement teacher testing programs.

Showing larger than average enrollment *increases* during the same period, Utah, Wyoming, Idaho, and Nevada have an increased demand for additional teachers.[14] They have been among the last to implement teacher testing programs.

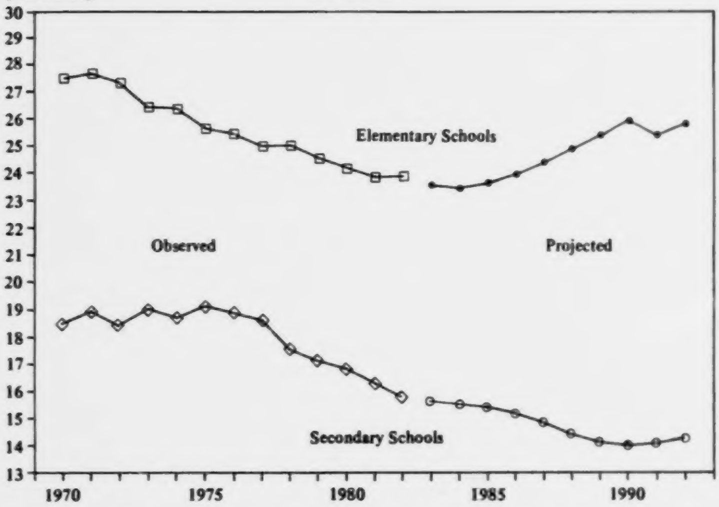
Between 1987 and 1992, enrollment is expected to increase in public elementary schools and decrease in the public secondary schools. Elementary schools can expect approximately 2.4 million additional students, whereas secondary schools can expect approximately 600 thousand fewer students (assuming promotion and dropout rates remain constant). The increase in elementary school students during the latter part of this decade will lead to an increase in secondary school students in the mid-1990's.

The average public elementary school pupil-teacher ratio provides an initial estimate of how many new elementary school teachers will be needed. The estimate is coarse, due to variations in local definitions and the specialized nature of teachers that are not assigned to classrooms.

In 1984-85, the average pupil-teacher ratios were 20.4:1 for elementary school students and 15.7:1 for secondary school students.[15] Based on these ratios, 71,000 new elementary school teachers and 34,000 fewer secondary school teachers will be needed between 1987 and 1992, in response to these enrollment changes. These conservative estimates do not take into account recent policy changes that will increase the number of teaching positions, such as lower pupil-teacher ratios, increased course options, and new kindergarten or preschool programs.

The final step in computing demand is to determine the

Figure 1.
Student Enrollment
1970-92



Source: Gerald, D.E. Projections of Educational Statistics to 1992-93, Washington, DC: National Center for Education Statistics, July 1985

numbers of elementary and secondary school teachers that will leave the work force between 1987 and 1992. This is the largest component of new demand and the least well estimated. The last study of teacher turn-over conducted by the U.S. Department of Education was conducted in 1969. Without good data on recent turn-over rates, it is extremely difficult to project future turn-over rates. Fortunately, the Center for Education Statistics is initiating a new study in this area.

The turn-over rate has traditionally been assumed to average 6.0 percent per year, a figure consistent with other professions.[16] This figure has been under attack. In analyzing data on occupational transitions using the Current Population Survey of the Census, the Bureau of Labor Statistics has estimated teacher separation rates to be approximately 9 percent in 1983-84.[17] The latest figures show some state turnover rates to be between 4 percent and 9 percent.[18]

A major component of the turn-over rate is the retirement rate. While there are no good data projecting retirement rates, there are strong indications that the number of retirements will increase. Figure 2 provides information concerning the percent of teachers at various age levels. From 1966 to 1976, the proportion of teachers under 30 was approximately equal to the proportion of teachers 40 and older. Starting in 1976, however, the proportion of younger teachers has dropped dramatically. Large percentages of teachers are in the 40 and older age group and can be expected to retire in the near future. Thus, the turn-over rate in 10 or 15 years could easily exceed 9 percent.

Using 6 percent as the annual average, approximately 446,000 elementary school teachers and 327,000 secondary school teachers will leave the classroom between 1987 and 1992. The projected demand, therefore, is that 517,000 additional elementary and 293,000 additional secondary school teachers will be needed by 1992. These numbers are comparable to the Center for Education Statistics' intermediate alternative demand projections.[19]

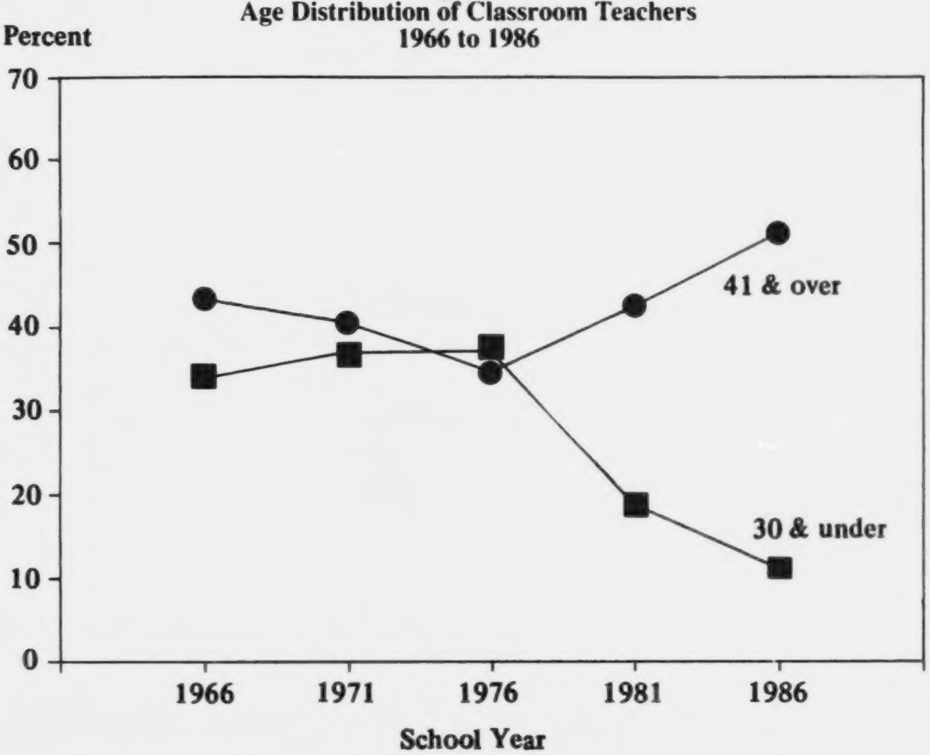
Using the 9 percent figure as the attrition rate, the projected demand between 1987 and 1992 is 739,000 additional elementary and 456,000 additional secondary school teachers. The difference between projections based on 6 percent and 9 percent is enormous. The 9 percent figure results in a projected demand that is 385,000 teachers, over 30 percent, higher. Depending on the number of supply, this can spell the difference between an adequate number of teachers and a critical shortage. More definitive and useful demand projections will be possible after CES collects basic turn-over and retirement rate data.

Projected Supply

The traditional supply of individuals to fill teaching positions consists of current teachers, new teacher graduates, former teachers interested in returning to teaching, those trained to teach who never taught, and those granted emergency certification. In recent years, the supply side of the equation has been altered by increased licensure and certification requirements, changes in teacher education program standards, increased attractiveness of other professions, and, to a degree, alternative certification programs.

In the fall of 1981, the supply of individuals living in the United States who had prepared to teach was estimated at 6.1 million. Approximately 2.2 million individuals were employed as teachers, 2.0 million had left the classroom and another 1.9

Figure 2.
Age Distribution of Classroom Teachers
1966 to 1986



Source: Reanalysis of unpublished data provided by the National Education Association.

million were trained as teachers but never entered the profession.[20] If a fraction of these individuals is attracted back to teaching, there will be no shortages.

It may be possible to attract some of these people back to teaching. A survey of former teachers has shown that one of the main reasons individuals leave the teaching profession is poor salary and that it would take better salaries to get them to return to teaching.[21] In recent years, teacher salaries have been increasing dramatically. The average teacher salary in 1985, $25,257, was 31 percent higher then the average teacher salary in 1981. The average national salary increase during that period was only 18 percent.[22] Little hard data exists, however, with regard to the extent increased salaries can actually be expected to affect the supply and demand equation.

Some locations have identified an adequate and willing reserve. In Oregon, for example, 25 percent of the reserve pool have indicated a willingness to return to the classroom.[23] Since the reserve pool is as large as the current teaching work force, it appears as though the state has an adequate teacher supply. One cannot assume that all schools in all states are in that fortunate position. In California, fewer than 5 percent have indicated a willingness to return.[24]

The major source for additional teachers has historically been new graduates of teacher education programs. The trends in this area have not been encouraging. The number of graduates completing teacher preparation has declined dramatically from 313,000 in 1973 to 143,000 in 1982.[25]

The supply and demand projections made by the Center for Education Statistics assume continued depressed enrollments for teacher preparation programs. For projection purposes it is appropriate to continue the existing trend and predict inadequate supplies. Simply put, the Center for Education Statistics warns that if current trends continue, the nation will face significant teacher shortages.[26]

Extended Projected Supply and Demand

The number of teacher education graduates declined during years when the supply was greater than the demand. If, however, teacher education program enrollments can increase, there may not be many problems. This raises the important policy questions being addressed by various education reforms: What can be done to encourage more people to enter the profession and how large an increase will be needed?

The Center for Education Statistics has projected supply and demand to 1992. Based on its assumptions, the annual demand for new teachers will outpace the supply of new teacher graduates by as much as 72,000 individuals annually.

In order for supply to meet demand, enrollments would need to increase from the 1982 level of approximately 143,000 to approximately 200,000. Teacher education programs were at that level during the 1960's and 1970's. Physically, the programs might be able to handle such enrollments again. Whether they can attract such numbers is another issue.

The Center for Education Statistics' projections are based on a particular set of reasonable, yet conservative, assumptions. Given the current ages of teachers, however, it is also reasonable to expect increases in attrition rates starting in the near future. Slight changes in retirement rate can have a significant impact on demand. If the attrition rate climbs to 12 percent in 1995, then the annual demand for new teachers could be as high as 350,000. This is almost two and one-half times the demand for new teachers in 1982.

If there is a significant increase in demand, then either the size of teacher education programs will have to increase dramatically, class sizes will have to increase dramatically, or schools will be forced to fill the teacher ranks with individuals entering the profession through non-traditional routes.

The projection does not necessarily indicate gloom. While the status quo will have to change, schools might be in better financial shape at the end of the century and better able to accommodate innovation. Salaries that were supporting an older work force will be able to be used to bring in younger, less experienced people at higher wages. There is, however, the ensuing question of whether schools will be able to provide the environment and funds to retain these individuals.

Supply and Demand and Teacher Testing

Teacher certification testing grew during the late 1970's and early 1980's—an era of open college admissions, surplus of teacher graduates, and declining student enrollments. Teacher education programs and school districts could afford tougher standards.

The first states to implement admissions testing programs in the late 1970's and early 1980's—Alabama, Florida, Kentucky, Oklahoma, and Wyoming—increased the size of their teaching force by approximately 26 percent from 1972 to 1982 while the number of teachers in the nation as a whole remained fairly constant.[27]

The first states to implement certification testing programs —Alabama, Arizona, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, and South Carolina—were also the states that experienced the greatest increases in teacher demand. The average number of teachers in these states grew 18 percent from 1972 to 1982.[28]

The era of surpluses, however, is over. School districts are experiencing an increasing number of vacancies. To help fill these vacancies, teacher preparation programs need to expand. Some will argue that tougher standards will help make the profession more attractive. Research into why individuals select or reject teaching as a profession, however, indicates that increased standards alone will not be enough. The increased standards must be accompanied by higher salaries,[29] as the profession has been experiencing in recent years.

While one goal of certification testing programs is to provide increased standards for the profession, some question its practicality, given the need to have an adult in every classroom every year. Emergency certification has been called a "loophole" that undermines standard raising.[30] Some states that were the first to implement higher standards 6 years ago, are now filling vacancies using large numbers of teachers with emergency credentials. Over 10 percent of the teachers in 1984 in Florida and Georgia, for example, held emergency or temporary credentials.

Regardless of their efficacy, admission and certification testing programs, as currently implemented, focus on screening people out of the profession. This emphasis has the greatest impact on students entering college with weak secondary school preparation, adults returning to college or making a career change, and open admissions institutions and their students.[31]

If one accepts the premise that current tests fairly, validly, and appropriately gauge potential to succeed as a teacher and that higher test scores are associated with better performance, then one might wish to alter passing scores as a means to control access to the profession. In an era of teacher surpluses, higher scores could be used to limit enrollment in teacher education programs. There has not been any research, however, demonstrating that teacher tests are associated with better classroom performance, so the basic premise may be unfounded.

Two types of teacher testing programs have been established which have the potential to encourage people to enter the profession. Beginning teacher assessment programs provide support and encouragement for new teachers. Emphasizing practical skills and providing opportunities to identify and remedy deficiencies, these programs provide quality assurance and also help keep new teachers in the profession.

Some states that permit individuals to teach under emergency or professional certification often require these individuals to pass subject matter skills tests. These programs provide some assurance that the interim teacher has the needed knowledge in the area he or she is going to teach.

Testing can also play a major part in alternative certification. Designed to attract college-educated, non-education majors into the profession, states are beginning to lift one of the major barriers to teacher supply—the need to major or take numerous courses in teacher education. Conceivably, testing can serve alternative certification in two ways. As an entrance requirement, tests can provide some assurance to applicants that once they are in the program, they will succeed. As an exit requirement, tests can provide an endorsement that these individuals are indeed qualified. Used in this manner, tests and alternative certification can redefine the pool of potential teachers and radically alter the supply side of the supply and demand equation.

Conclusions

While preparation programs were graduating a surplus of teachers between 1972 and 1982, more exacting admissions and certification testing programs were developed. While purporting to raise standards, these programs also tend to restrict access to the profession. If current trends continue and testing programs do not change, admissions and certification testing programs may be out of sync with the times. The demand for new teachers is predicted to increase dramatically in the next decade. Schools of education and the reserve pool of former teachers and teacher education graduates may not be able to meet the coming teacher demand. Changes in teacher testing programs and certification requirements may also be needed.

Summary

1. While teacher education programs produced a surplus of teachers at the begining of the decade and nearly all current vacancies are being filled, several states are reporting difficulties in filling some positions, especially in mathematics, science, special education, bilingual education, and industrial arts.

2. Current projections to 1992 indicate significant increases in the demand for additional teachers. Projecting an additional 8 years and considering the ages of current teachers indicate an enormous demand that might not be met by teacher education programs and traditional certification routes.

3. Current admissions and certification testing programs, designed to restrict access to the profession, can be expected to further limit the supply of new teachers. Testing programs, can, however, also be used in programs designed to attract new people to the profession.

Notes:

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Content and Difficulty of a Teacher Certification Examination

What skills are tested by the most frequently used teacher examination?

How are teacher tests evaluated?

How are passing scores set and do they provide an adequate standard?

Establishing a teacher testing program is a long and tedious process. A state legislature usually would debate the idea and gather information long before taking draft legislation through to final laws and regulations. State departments of education would spend years planning the program. Instruments are researched. Validation studies are conducted. Vast amounts of advice are obtained.

Agencies point to powerful policy goals to justify the time, expense, and aggravation caused by these teacher testing programs. Such programs attempt to provide needed accountability by establishing and enforcing standards for the profession. As the president of one state board of education put it, "We are trying to assure the public that we have better quality applicants coming into the teaching profession."[1]

Whether these programs establish meaningful standards, however, has been an issue of debate. Some accuse teacher certification examinations of ensuring that new teachers meet "only the most minimum standards of academic ability."[2] Such accusations suggest that teacher tests may not be rigorous enough to be effective.

Regardless of the debate, states have accepted teacher tests, and their use has been upheld by the courts. Withstanding scrutiny, the instruments are appropriate by some definitions. In this essay, the content of the most popular teacher certification test series, the NTE, is examined in terms of coverage, passing scores and passing rates. The NTE is often called by its former name, the National Teacher Examinations.

The NTE Battery has the longest history and is the most popular set of the teacher certification examinations. The series includes a Core Battery covering basic skills and subject area examinations covering specific content knowledge. Originally created in 1940 by the American Council on Education, the NTE program is now part of the Educational Testing Service. Because the NTE has served as a model for other paper and pencil teacher testing programs, many of the observations pertaining to this examination also pertain to other teacher tests.

Content

After voting for legislation leading to a teacher examination, one state legislator proclaimed that the passing scores should be based on what is needed to perform the job, regardless of how many pass or fail. Implied in that remark is the expectation that the examination would test the skills individuals need to teach children. That expectation, no doubt shared by many, calls for a test of teaching ability or the ability to impart knowledge clearly so that it is absorbed by students.

Existing certification testing programs, however, do not assess teaching ability. As outlined in the question and answer section, certification tests are usually composed of a test of basic skills, a test of professional knowledge, and a test in the subject area the candidate intends to teach. Certification tests, including the NTE, do not cover many elements important to professional performance, such as dedication and motivation, human relations skills, perseverance, and caring.[3] Certification tests, therefore, cannot be validly used to infer mastery of skills beyond those typically covered in teacher preparation programs. The publisher of the NTE, the Educational Testing Service, is adamant about these limitations and specifically states that the test should not be used "to determine compensation, retention, termination, advancement, pay supplements, or changes in provisional employment status of teachers once they are employed."[4] The president of Educational Testing Service refused to permit the NTE to be used as the Arkansas recertification test.

Most certification tests assess the same content: communication skills, general knowledge, and professional knowledge.

This section was written by Lawrence M. Rudner.

With the NTE, communication skills include reading, writing, and listening. General knowledge includes mathematics, science, social studies, literature, and fine arts. Professional knowledge includes classroom management, school law, and student assessment. Specific categories within some of these skill areas are shown in figure 3.

Figure 3. Sample Content of the NTE Core Battery

Communication Skills: Reading
Understanding the explicit content of a written message
Clarifying a written message
Judging the nature and merits of a written message

Communication Skills: Writing
Grammar and syntax
Sentence correction

Communication Skills: Listening
Basic message comprehension
Analysis of a message
Evaluation of a message
Feedback and response

General Knowledge: Literature and Fine Arts
Recognizing basic elements and works of literature and fine arts
Analyzing and interpreting works of literature and fine arts
Relating works of literature and art to one another

General Knowledge: Mathematics
Number sense
Using numbers to quantify thinking
Recognizing and using mathematical relationships
Understanding the mathematical basis of measurement
Understanding deductive reasoning
Interpreting graphic, symbolic, and verbal material

Professional Knowledge
Planning objectives, diagnosing needs, identifying resources, and designing instruction
Implementing conditions that facilitate learning
Evaluating student achievement
Knowledge of students' constitutional rights
Understanding extra-classroom influences on teachers and students
Knowledge of the teaching profession and professional teaching behaviors

The categories that are assessed tell only part of the story. The categories are broad and can cover a wide range of items. Number sense, for example, can range from simple counting to advanced algebraic estimation. To provide the reader with a better indication of the test content, three 1982 NTE items of average difficulty, selected by NTE staff, are shown in figure 4. The interested reader is referred to the NTE Study Guide to obtain a more thorough understanding of the NTE content.

Figure 4. Sample Items from the NTE

1. Suppose that a car averages a certain number of kilometers per hour going one way on a 500 kilometer trip, and on the return trip along the same route its average rate is twice as fast. Which statement is true about the return trip?
   A) The time it takes is twice as long.
   B) The time it takes is half as long.
   C) Both the rate and the time are doubled.
   D) Both the rate and time are halved.
   E) Nothing about the time can be determined.

2. Keats must be the finest poet to have written in the English language; after all, he wrote the finest poem.

   The author of the statement assumes which of the following?
   A) A poet should be judged by his or her best poem.
   B) Most of Keat's poetry is great.
   C) Poets are concerned about how their poems are judged.
   D) Keats' poetry is widely read.
   E) There are better poets than Keats, but they did not write in English.

3. Good instructional planning is built around the idea that what learners will learn is most often determined by
   A) what they should know
   B) what their teacher knows
   C) how and why they learn
   D) who does the teaching
   E) what parents and administrators desire

Source: *A Guide to the NTE Core Battery Tests*, Princeton, NJ: Educational Testing Service, 1984. Copyright, 1982, 1984, Educational Testing Service. Reproduced with permission.

Item 1 is from the General Knowledge mathematics test. The correct answer, option B, was selected by 62% of the examinees who took the test of General Knowledge at its first administration in November 1982. Item 2 is from the Communication Skills reading test. The correct answer, option A, was selected by 66% of the examinees. Item 3 is from the Test of Professional Knowledge. The correct answer, option C, was selected by 65% of the examinees.

As evidenced by these representative items, The Core battery tests are not difficult. The Test of Communication Skills is designed to assess basic reading, writing and listening skills needed to teach effectively. The Test of General Knowledge covers knowledge that the well-educated teacher should know. Advocates for these tests argue that people who cannot pass a test of basic skills and knowledge test should not be placed in a position where they are responsible for the education of children. Because these tests cover basic skills, they are often viewed as comprising a basic literacy test. The use of the word "literacy", however, is a misnomer as the term often refers just to basic reading skills.

Validation studies conducted in Indiana,[5] Louisiana,[6] Maryland,[7] Mississippi,[8] Montana,[9] New Mexico,[10] New York,[11] North Carolina,[12] Tennessee[13] and Virginia[14] have found this content of the NTE to be appropriate for their states. Following the precedents established in *United States v. South Carolina,*[15] the validation studies conducted by the states rely upon panels of experts to evaluate the instruments and attest to their validity.

Panel members are typically comprised of teachers, administrators, and teacher educators from within the state. They address issues of

1) opportunity to learn,
2) coverage,
3) relative emphasis,
4) content appropriateness, and
5) job relevance.

These questions are summarized in figure 5 and are described in more detail on the following pages.

The validation process, which is based on legal precedent, is designed to demonstrate that the test reflects knowledge and academic skills that examinees have had an opportunity to learn. Having withstood judicial examination, this content and validation process is somewhat entrenched. In all likelihood, states interested in breaking this pattern will have difficulty establishing new legal precedents, an undertaking which is expensive, both politically and practically.

Opportunity to Learn

In validating the NTE, the expert panel members are first asked if students enrolled in a standard teacher preparation program would have had an opportunity to learn the answer to each question as part of the teacher preparation program. A test question is classified as appropriate if more than 50% of those able to make a judgment indicate that at least 90% of the students had an opportunity to learn the item. Usually over 90% of the items can be evaluated and over 95% of the items are found to be appropriate.

Figure 5. Validation Questions Asked of Teacher Certification Tests

OPPORTUNITY TO LEARN: Does each test question focus on material that at least 90% of the teacher education students would have had an opportunity to learn?

RELATIVE EMPHASIS: Is the relative emphasis given to major content topics in the test the same as, more than, or less than the emphasis given the topic in the curriculum?

COVERAGE: Are there any major content topics not covered in the tests that are part of the curriculum?

CONTENT APPROPRIATENESS: How would the overall similarity between the test content and the teacher education curriculum best be described?

JOB RELEVANCE: What is the degree to which the content of the test is relevant to the job of the beginning practitioner—crucial, important, questionable, not relevant?

Source: Educational Testing Service, Report on a Study of the NTE Core Battery Tests by the State of New Mexico, August, 1983.

Relative Emphasis

The second task is to judge the emphasis placed on the major content topics on the test compared to the emphasis placed on those topics in the college programs. The skill areas listed in figure 3 are examples of topics within tests. Panel members are asked whether the emphasis in the curriculum is the same, more than, or less than the emphasis in the test.

An issue arises on how to analyze this information. Consider, for example, a situation in which half the panel members feel that the test overemphasizes a topic, half believe that the topic is underemphasized, and no one believes the test and the curriculum equally emphasize the topic. If one concentrates solely on the percent of people indicating equal emphasis, then the topic would be completely inappropriate.

One approach taken in teacher certification test validation studies is to compute an index of "difference in relative emphasis" (DRE), which is based on the relative percents of panel members who feel there is a difference in emphasis. This approach has the net effect of one vote for overemphasis and one vote for underemphasis, i.e. two votes for equal emphasis.

Using the DRE, states are finding that the tests properly emphasize the topics taught in the curriculum. The tests of Professional Knowledge and General Knowledge have the best match. The Communication Skills tests typically have the poorest match.

Coverage

The third task asked of panel members is for them to identify major content topics in the curriculum that are not included among the test content topics. In virtually every validation study, panel members identify missing topics. There is little agreement, however, with regard to these missing topics. Often topics that are mentioned by panel members are already included in the tests or are materials of regional interest.

Content Appropriateness

The fourth task is to evaluate the similarity between the tests and the curriculum. This is done by asking panel members to select from four options:

Test topics
1) parallel curriculum very closely
2) have some differences but not appreciable
3) have some appreciable differences
4) have little similarity.

Usually, less than 20% of the panel members select the first option for each of the tests. Most panel members believe the tests do not parallel the curriculum closely. In validation studies, the selection of options 1 or 2 is interpreted as signifying acceptable appropriateness. The General Knowledge tests are rated as most similar to the curriculum with matches of 70-80 percent not uncommon. The Professional Knowledge and Communication Skills tests fare respectably, but less well.

Job Relevance

Finally, panel members are asked to judge the degree to which the content of the tests is relevant to the job of beginning teachers in their state. Panel members determine whether each item is:

1) Crucial
2) Important
3) Questionable
4) Not relevant

A question is considered relevant if either option 1 or 2 is selected.

Almost all the items within the tests are viewed as either crucial or important. The Communication Skills test typically has the largest number of relevant items, followed by the Test of General Knowledge and the Test of Professional Knowledge. Often 80% or more of the items meet the criteria.

The task of judging job relevance does not involve identifying whether the crucial or important job elements are covered by the tests. Rather, the question is asked the other way around: are the skills covered by the test relevant? An item assessing the ability to add two fractions, for example, that is relevant to the job of teaching, might be included in the test, and would meet the criteria of this validation task. An item assessing the *ability to teach* addition of fractions, such as one asking why a common denominator is needed, will not be included in the task. Meeting the job relevance criteria does not assure that items important to the job of teaching are included in the test.

Passing Scores

Each state must determine the level of performance it expects of a minimally qualified applicant for certification. The process involves systematically gathering and analyzing judgments made by experienced teachers, administrators, and teacher educators within the state. These judgments are then combined to form a "study score" or the score that the judges feel would be obtained by a minimally qualified individual if the test were perfectly valid and perfectly reliable. Since the tests are not perfectly valid, the State Department of Education then takes the errors of measurement into account and establishes a passing score which is different, almost always lower, than the study score.

There are several approaches to quantifying judgments as part of the standard-setting process. Typically, the process first involves developing a hypothetical reference group of minimally qualified individuals just graduating from teacher preparation programs.

With this hypothetical reference group in mind, panel members then estimate the percent of individuals in the group that would be able to correctly answer each question. The average estimated percents of minimally qualified people that would answer correctly are then added to determine the study score for the test.

Because of imprecision in estimating the study score and in measuring a candidate's ability, minimally qualified candidates do not necessarily obtain scores above the study score. If the study score, which represents the score that would be obtained if the test were perfectly valid, were adopted as the passing score, then some qualified candidates would most likely fail the test and be improperly denied certification.

State Departments of Education are left with making a difficult decision: should these errors in measurement be taken into consideration in determining the passing score? If so, in what direction should the adjustment be made and how large an adjustment? An adjustment upward would raise the standard and make it more difficult for individuals who are less than minimally qualified to enter the profession. A downward adjustment would result in fewer rejections of individuals who are just minimally qualified.

As shown in table 4, 12 out of 13 states using the NTE adjusted the passing scores to be lower than the study scores. Only Rhode Island chose to use the score the state panel expected to be obtained by a minimally qualified individual. The passing scores range from a low of 630 to a high of 657, and average 8 points less than the study scores.

These are relatively large adjustments. The standard errors of measurement range for the Communication Skills, General Knowledge, and Professional Knowledge tests are

3.5, 3.5 and 3.8, respectively. The average adjustment, then, is two standard errors of measurement downward.

The intent of the adjustments is to reduce the probability of erroneously rejecting a minimally qualified applicant. With an 8-point adjustment, there is a less than 1 in 1,000 chance of rejecting a qualified applicant whose actual ability is 4 points above the study score. The adjustments, however, also greatly increase the probability of accepting an unqualified applicant. With an 8-point downward adjustment, there is now an 8 in 10 chance of accepting an unqualified applicant whose actual ability is 4 points below the study score. Put another way, the 7- to 9-point downward adjustments from the average study scores raise the pass rates from approximately 66 percent, 61 percent, and 74 percent on the Communication Skills, General Knowledge, and Professional Skills tests to approximately 82 percent, 81 percent, and 88 percent, respectively.[16]

With these downwardly adjusted passing scores, the actual number of items one needs to answer correctly in order to pass the examinations is relatively low. The 1982 Professional Knowledge test, for example, is comprised of 104 questions. The average passing score set by states using the test was 642. To obtain this score, one only needs to answer 47 of the 104 items correctly. Passing scores range from 35 items in the state with the lowest passing score to 53 items in the state with the highest passing score. The test is scored on the basis of the number of correct answers without subtracting points for incorrect answers or omitted questions. Given the statistical probability, one could expect to answer 21 questions correctly by randomly marking the answer sheet. Candidates also have multiple opportunities to take the examination.

Passing Rates

Given that the tests are not difficult and that the passing scores appear to be relatively low, one would expect virtually everyone to pass teacher certification examinations. Yet, this is not the case. As shown in table 4, passing rates vary from 79 percent in New York to 94 percent in Kansas. The average passing rate is about 87 percent.

Table 4. Study Scores, Actual Passing Scores, and Pass Rates for States Using the NTE

State	Communication Skills			General Knowledge			Professional Skills			Pass Rate
	study	actual	difference	study	actual	difference	study	actual	difference	
Indiana	659	653	-6	655	645	-10	640	646	6	88
Kansas							645	642	-3	94*
Kentucky	663	643	-20	658	637	-21	661	641	-20	93
Louisiana	652	645	-7	651	644	-7	652	645	-7	87
Mississippi	652	644	-8	647	639	-8	650	642	-8	88
Montana	652	648	-4	648	644	-4	652	646	-6	92
New Jersey				656	644	-12				83
New Mexico	656	644	-12	657	645	-12	642	630	-12	88*
New York	656	650	-6	656	649	-7	652	646	-6	79*
North Carolina							644	644	0	80*
Rhode Island	649	649	0	657	657	0	648	648	0	n/a
Tennessee	662	644	-18	658	640	-18	655	635	-20	n/a
Virginia	651	649	-2	641	639	-2	641	639	-2	n/a
minimum	649	643	-20	641	637	-21	640	630	-20	79
maximum	663	653	0	658	657	0	661	648	6	94
mean	655	647	-8	653	644	-9	648	642	-7	87

* denotes passing rate on the most difficult test not the overall pass rate.
n/a denotes information not available.

Source: Zetler, Alan G. "Montana Validation of the NTE Core Battery: Study Report," contractor's report, January 1986; state validation reports and personal communication with state directors of testing.

Had study scores, rather than adjusted scores, been used as the passing scores, passing rates would have been considerably lower. Based on the national distribution of scores, the passing rates would have been 12 to 20 percent lower on each of the three tests. This implies that possibly 8,000 candidates in 13 states have scores in the safety range between the study score and the actual cutoff score used by the state.

Summary

1. The most commonly used teacher certification test, the NTE Core battery, is comprised of tests of Communication Skills, General Knowledge, and Professional Knowledge.

2. Validation studies conducted for state departments of education and involving teachers, teacher educators and administrators find that these tests do assess the knowledge and skills developed in teacher preparation programs.

3. Passing scores range from about 35 to 55 percent of the items. In establishing the passing scores, most states have made sizable adjustments to allow for errors of measurement. The adjustments have reduced the probability of failing a marginally qualified candidate, at the cost of increasing the probability of passing a marginally unqualified individual.

4. The average passing rate for the ten NTE states providing data is about 87 percent. Had adjustments not been made in determining the cutoff score, the average passing rate would have been substantially less.

Notes:

1. Watkins, T., President of the Virginia Board of Education as cited by Thomas Toch, "Putting Teachers to the Test," *Washington Post*, November 10, 1983.

2. Ibid.

3. NTE Program, *Guidelines for Proper Use of the NTE Tests*, Princeton,NJ: Educational Testing Service, 1985, 3.

4. Educational Testing Service. *A Guide to the NTE Core Battery Tests: Communication Skills, General Knowledge, Professional Knowledge*. Princeton, NJ: NTE Policy Council, 1984, 146.

5. Educational Testing Service. *Report on a Study of the National Teacher Examinations by the State of Indiana*, Princeton, NJ: Educational Testing Service, 1985.

6. Garvue, R., C. Falkowski, L. Hoffman, and others, *The 1983 National Teacher Examinations Core Battery Validation Study: Final Report*. Baton Rouge, LA: Louisiana State Department of Education, 1983.

7. Educational Testing Service, *Report on a Study of the National Teacher Examinations by the State of Maryland*, Princeton, NJ: Educational Testing Service, 1985.

8. Educational Testing Service, *Report on a Study of the National Teacher Examinations by the State of Mississippi*, Princeton, NJ: Educational Testing Service, 1979.

9. Zetler, A.G., *Montana Validation of the NTE Core Battery: Study Report*, report submitted to the Montana State Board of Education, 1986.

10. Educational Testing Service, *Report on a Study of the NTE Core Battery Tests by the State of New Mexico*, Princeton, NJ: Educational Testing Service, 1983.

11. Educational Testing Service, *Report on a Study of the NTE Core Battery by the State of New York*, Princeton, NJ: Educational Testing Service, 1983.

12. Educational Testing Service, *Report on a Study of the NTE Test of Professional Knowledge by the State of North Carolina*, Princeton, NJ: Educational Testing Service, 1983.

13. Educational Testing Service, *Report on a Study of the National Teacher Examinations by the State of Tennessee*, Princeton, NJ: Educational Testing Service, 1984.

14. Cross, L.H., *Final Report, Validation Study of the National Teacher Examinations for Certification of Entry-Level Teachers in the State of Virginia*, Blacksburg, VA: Virginia Polytechnical Institute and State University, 1982.

15. *United States v. South Carolina*, 445 F. Supp. 1094 (1977).

16. Percentages are based on national percentile equivalents.

Assessment of the Teaching Skills of Beginning Teachers

What problems are addressed by beginning teacher assessment programs?

How do beginning teacher assessment programs function?

What effects can be expected?

What problems are encountered?

In a growing number of states, programs have been established for beginning teachers designed to provide them with assistance during their first years of teaching and determine whether they will be eligible for regular certification. Seven states currently use formal observation systems as part of their beginning teacher program. This section describes the processes generally being implemented in statewide beginning teacher programs and provides an examination of the content and use of these classroom observation instruments.

In the literature on teaching, it has become popular to treat "internship", "induction year", and "beginning teacher program" as synonymous. These programs are designed for teachers who have no prior teaching experience. The intern is issued a letter of employment, and he or she assumes the full responsibility of a teaching professional under a provisional teaching certificate.

With internship programs, the life of a teacher is no longer neatly divided into two phases, preservice and inservice. Teacher education becomes a continuum which begins with admission into a teacher education program and then proceeds into the teacher's professional life.[1]

For clarity, this section will use "beginning teacher program" to denote the program itself, and use the term "intern" to identify the beginning teacher.

Problems Addressed by Beginning Teacher Programs

Research on interns concludes that they often lack, and know that they lack, competence in planning for instruction, evaluating student work, motivating students, and adjusting to the classroom environment.[2] This lack of competence is often compounded by the problems beginning teachers face, including the pressures raised in adjusting from the relatively relaxed life of a student to the demanding life of a teacher, and the realities of teaching compared to the expectations.[3] The pressures encountered by beginning teachers apparently are enough to discourage many from staying beyond the first few years of teaching.[4]

Beginning teacher programs are designed to serve two major purposes:

1) They address the problem of some first-year teachers who are not ready to assume full classroom responsibilities without additional on-the-job assistance. The programs provide a support function. Mentor/peer teachers often engage in the assessment so that they can work with new teachers on improvement activities.

2) They provide a quality screen. The weak intern who cannot be remediated through supervision is identified and denied full certification. The principal's assessments are often the basis for evaluation and recommendation for certification.

Instructional Development

Seven states implementing beginning teacher programs employ classroom observation instruments to assess the intern's skills. These classroom observation instruments have been developed using one of two methods.

In the "consensus method", which descended from the competency based teacher education (CBTE) movement of the early 1970's, the designers develop an exhaustive list of teacher competencies. In many cases, a cross-section of local people, including representatives from institutions of higher education, school professionals, and in some cases, members of the lay community, develop the competencies.

This section was written by Gary R. Galluzzo, Western Kentucky University.

The competencies are typically identified based on a sorting process wherein a large list of competencies are generated, categorized, organized into a framework for efficient use, and field tested. Decisions about which competencies to include in the final list are made by the consensus of the group of representatives. That is, when the group agrees that a particular competency is valuable for the intern to attain, then the competency is included in the final list. This process implies that the competencies can be observed when raters come into the classroom.

In contrast to the consensus method, there is the "research review method", employed by a larger number of states. This method requires a group of education professionals to read the relevant research thoroughly and develop a list of research-informed competencies related to effective teaching. Typically, the competencies identified using this approach are similar to those used in observation instruments designed for process-product research studies.

Content

Both the group consensus method and the research review method identify two salient characteristics of effective beginning teachers: efficient use of time and a high rate of on-task behavior.

Georgia, for example, where performance assessment was first implemented, employs a group consensus method. The competencies and indicators focus on teacher behaviors demonstrating an intern's skill in promoting interaction, organizing instruction, presenting information, managing the classroom, and maintaining a healthy and stable classroom environment.

The performance assessment program in Florida has a set of goals similar to that of Georgia's. In contrast to Georgia, however, the developers in Florida combed the literature on teacher effectiveness and then generated a list of behavioral indicators of effective teaching as demonstrated by research.

The similarity of results is underscored by the fact that the models of teaching implied by the different instruments capture the same six phases of instruction outlined in the current research on teaching:[5]

1) daily review of previous work;

2) presentation of subject matter with an emphasis on the efficient use of time and materials;

3) guided student practice, including a) frequent questioning to practice learned knowledge and skills and checking for comprehension, b) cuing to maintain academic focus, and c) instructing the whole group;

4) feedback and correction, where the teacher either praises superior academic performance or corrects or clarifies incorrect student performance,

5) independent practice, either seatwork or homework, which is designed to reinforce the content being studied; and

6) regular review to maintain the currency of the material that has been studied over the year.

While there are variations across the states, the seven assessment programs all incorporate these six features of providing instruction and managing time.

Table 5 contains a list of the performance assessment areas identified by the seven states with observation systems. While the labels differ, all seven states are concerned with planning for instruction, presentation, and classroom management. This is not to say that there are no differences. Human relations skills and professional behavior are considered important by Georgia, Oklahoma, South Carolina, and Virginia. Florida, Georgia, and Oklahoma also include student evaluation.

Process

Each of the seven states using performance assessment instruments provides assistance to the intern at least throughout the first year of teaching. Typically, supervisory committees for beginning teachers are responsible for observing the interns and providing feedback about performance as measured on the observation instrument.

The committee is usually comprised of the building principal, a teacher educator, and a supervisory classroom teacher. Each committee member undergoes some training in how to observe using the designated classroom instrument. The supervisory teacher is assigned to work closely with the intern throughout the year.

The intern is typically expected to be observed nine times during the year, with each committee member making three visits. After each observation, the observer and the intern are expected to meet to discuss the lesson. The intern's strengths and weaknesses are identified. The supervisory classroom teacher then works with the intern on developing the skills in need of improvement. By way of this committee, beginning teacher assessment programs provide a collaborative arrangement where the focus is on guiding the intern to become the best teacher possible.

Where a member of the committee identifies a weak or missing skill, tutorials and training are provided. After a year, if two members of the beginning teacher committee agree the intern still lacks essential skills, then either the employment of the intern is terminated or another year of internship is recommended. If, after a second year, there is little or no acceptable improvement, then the intern is denied a teaching certificate. In practice, weak interns often recognize their deficiencies and leave the profession.

The process is usually explained in the state's legislation or mandate. There is a body of research, however, that indi-

Table 5. Areas of Performance Assessment in States with Beginning Teacher Assessment Programs

State	Performance Assessment Areas
Florida (and Kentucky)*	Planning Management of Student Conduct Instructional Organization and Development Presentation of Subject Matter Verbal and Nonverbal Communication Evaluation of Student Achievement
Georgia	Teaching Plans and Materials Classroom Procedures Interpersonal Skills Professional Standards Student Perceptions
North Carolina	Management of Instructional Time Management of Student Behavior Instructional Presentation Instructional Monitoring Instructional Feedback
Oklahoma	Human Relations Teaching and Assessment Classroom Management Professionalism
South Carolina	Planning Classroom Processes Classroom Management Human Relations
Virginia	Planning Lesson Development Instructional Management Classroom Management Affective Climate Evaluation

* Florida and Kentucky use the same instrument.

cates that much of what is expected simply does not take place.

The processes used by the different states vary. In Georgia, for example, the observers are employees in a network of 17 regional assessment centers located throughout the state. South Carolina provides an extensive training and observer evaluation program. Virginia provides training workshops throughout the state offering instruction in each of its assessed skill areas.

Effects and Implications

The proponents of beginning teacher assessment programs claim that the internship experience provides an opportunity for interns to develop their skills in a closely supervised setting. In the process, not only do interns develop, but so do mentor teachers, principals, and teacher education programs.

By being placed in the role of transmitting knowledge of teaching and being responsible for supervising the intern, the mentor teacher can be expected to experience a certain degree of professional growth in supervisory skills as well as in skills covered by the observation system.

Beginning teacher programs, which incorporate the principal or supervisor in the system, require them to learn to observe teacher behavior with the state-designated instruments. These instruments, which represent the latest interpretations of effective teaching and may force the principal to identify exemplars of effective teaching. Participation in this process could also enrich the more experienced educator's understanding of effective teaching behaviors derived from research.

The use of beginning teacher assessment programs can also be expected to influence teacher education programs. In some cases, teacher education programs have been organized around the skills assessed by the beginning teacher programs. The use of the assessment instrument as part of student teaching is relatively common. Since teacher education programs cannot afford to graduate candidates who have a shallow knowledge of the principles included in the performance instruments, the instruments force a closer alignment between teacher training programs and the skills the state deems important for teachers.

Problems and Limitations

As pointed out in other chapters, paper and pencil tests cannot assess many of the characteristics one often associates with effective teachers, such as caring, dedication, and sensitivity. In theory, observation systems help fill that void. Observation systems, however, are not without their own conceptual, theoretical, technical, and methodological deficiencies.

An underlying assumption of classroom observation systems is that their use will promote student achievement.[6] There is little research, however, to demonstrate this. In other words, there is little evidence that interns who exhibit these behaviors yield students who perform better on standardized tests.

Observation instruments take snapshots of behaviors. They do not necessarily reflect the actions a teacher would take as part of routine behavior or the actions the students would take in the absence of observers. The research used in developing some of the instruments cites behaviors in isolation, not as a composite. The process, therefore, has been accused of assessing only whether the candidate knows the skills and expectations listed on the observation form. The process cannot evaluate the teacher's skills in a complete context.

The systems generally take a narrow view of teaching, namely meeting with students. This is counter to current views of teaching as a wide array of knowledge, skills, and dispositions that are displayed outside of pupil contact hours. An effective teacher, for example, must be able to learn new material and organize it conceptually. This does not take place in the classroom before students.

The research methods used to determine what teachers ought to be able to do are frequently based on the correlations between behaviors exhibited by experienced teachers and student outcomes. Although there is some emerging evidence that these behaviors can be taught to new and inexperienced teachers, little is really known about the transfer of these findings. It may not be realistic to expect observation systems to lead to longterm change or improvement.

Moreover, state systems are not able to consider the specific circumstances of local schools. They must look for the same skills and behaviors regardless of what the schools or students are like. This is not realistic. Teaching is not the same everywhere.

Finally, costs should be considered. Observation systems require expensive training, retraining, and evaluation of raters in addition to providing for significant amounts of release time.

Summary

Beginning teacher assessment programs are designed to increase the quality of instruction in the classroom. Typically, they:

1. Provide for the identification of interns who either do not possess basic knowledge about effective teaching or cannot implement it;

2. Yield diagnostic information for assisting the weak intern in developing his or her skills;

3. Are based on effective teaching research identifying specific, desirable skills and attributes;

4. Potentially enhance the effectiveness of mentor teachers and the principal in their playing leadership roles;

5. Potentially improve the coordination of teacher education programs and classroom needs; and

6. Have not been sufficiently evaluated in terms of their actual effects or in terms of instrument validity.

Notes:

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IV.
State-by-State Descriptions

Introduction

As of April 1987, every state except Alaska and Iowa had either implemented or was planning to implement some form of teacher testing program. In the pages that follow, state testing programs for admission to teacher education programs, initial certification, on-the-job performance, and recertification are described.

The most popular forms of teacher testing are admissions testing and certification testing. Tables 6 and 7 contain summaries of state-level activities in these areas. Twenty-seven states have admissions testing programs and 44 states have certification testing programs.

As shown in table 6, 23 states have already implemented a testing program for admitting students into teacher education programs. Another 4 states are scheduled to implement programs in the near future. The Pre-Professional Skills Test (PPST) is the most frequently used admissions test. Other tests that are used include the Scholastic Aptitude Test, the American College Testing Programs' college admissions test, and custom-made tests. Almost all of the states that have admissions testing programs also test prospective teachers as a requirement for initial certification.

The average pass rate for admissions tests, for those states providing data, is approximately 72 percent. Connecticut has the lowest passing rate, with 55 percent passing; Nevada has the highest passing rate, with 95 percent passing. These numbers, however, must be interpreted with caution as the states use different definitions. Some refer to the percent of individuals passing per administration, some the percent of individuals who ultimately pass after repeated attempts, and other states only report pass rates by subtests (e.g. professional knowledge, reading). Comparisons and computations based on these figures must recognize that passing rates will vary as a function of the definition used. Since the numbers are closely related, usually within 10 percent of each other, the variation is not excessive and rough comparisons are appropriate.

As shown in table 7, 26 states are currently testing prospective teachers as a certification requirement. Another 18 states are scheduled to implement programs in the near future. The NTE is incorporated into the largest number of certification testing programs. Other tests that are used include the Pre-Professional Skills Test, the California Basic Education Skills Tests and custom-made tests. In 31 states, the tests include basic skills; in 29 states, the tests include subject area knowledge.

The average pass rate on initial teacher certification tests, for those states providing data, is approximately 83 percent. Delaware has the lowest pass rate, with 69 percent passing; Kansas has the highest, with 94 percent passing. As with admission test passing rates, these passing rates incorporate different definitions and should be interpreted with caution.

Three states are testing or have recently tested practicing teachers as a requirement for recertification: Arkansas, Georgia, and Texas. Each of these states is using custom-made tests. The Texas test covered basic reading and writing skills. A total of 98.6 percent of the 247,000 teachers taking the test in 1986-87 passed. The Arkansas and Georgia programs include tests of subject area skills. These states are providing multiple opportunities for teachers to pass the tests over a two-year period. The two-year periods will end in 1987 in Arkansas and 1988 in Georgia.

Seven states have implemented formal observation systems for beginning teachers: Florida, Georgia, Kentucky, North Carolina, South Carolina, and Virginia. These programs usually provide assistance for beginning teachers and result in a recommendation to the state that determines whether the candidate will receive regular certification. Kentucky uses the instrument developed in Florida. The rest of the states use custom-developed observation systems.

These descriptions were compiled by OERI staff from a variety of sources and confirmed by the state directors of testing in November 1986, and again in April 1987. Where possible, state documents were used to provide the information under each category. Otherwise, program histories were extracted from J.T. Sandefur's *Competency Assessment of Teachers: The 1986 Report;* certification requirements from *The Impact of State Policy on Entrance into the Teaching Profession* by Margaret Goertz, Ruth Ekstrom, and Richard Coley; and the numbers of emergency teaching certificate holders from *The Condition of Teaching: A State by State Analysis, 1985,* by C. Emily Feistritzer. The descriptions were then sent to the directors of state teacher testing programs for confirmation in November 1986. Thirty-eight states responded; most sent corrections and edits. The certification process in many states had changed since the Goertz report. Confirmations or changes were obtained in November 1986 from all the

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This section was prepared by Lawrence M. Rudner and Kay C. McKinney.

Table 6. A Summary of Testing for Admissions to Teacher Education Programs

State	Test[1]	Passing Scores[2]	Pass rate[3]	Other tests[4]	Education graduates[5]	Implementation in place	Implementation when
Alabama	Custom		80%	C	1,900	X	
Arizona	PPST	173,172,174	79	C	2,154	X	
California	CBEST		77	C	9,562	X	
Colorado	CAT	75%ile	58	C	2,361	X	
Connecticut	Custom		55	C	2,491	X	
Florida	SAT OR ACT	40%ile	—	C,P	2,170	X	
Indiana	—		—	C	3,750		—
Kentucky	CTBS	12.5 GES	63	C,P	1,200	X	
Louisiana	NTE	–,645,644	n/a	C	1,820	X	
Mississippi	COMP		n/a	C	1,689	X	
Missouri	SAT or ACT	800,18	—		2,758	X	
Nebraska	PPST	170,171,172	—	C	2,253		1987
Nevada	PPST	169,169,170	95	C	258	X	
New Mexico	Misc		n/a	C	—	X	
North Carolina	NTE	636,631,644	n/a	C,P	4,500	X	
North Dakota	Misc		—	C	950	X	
Ohio	—		—	C	5,829		1987
Oklahoma	Misc[6]		—	C,P	2,400	X	
Oregon	CBEST		77	C	1,700	X	
South Carolina	Custom		67	C,P	1,282	X	
Tennessee	PPST	169,169,172	n/a	C	4,000	X	
Texas	PPST	171,172,173	71	C,P,R	10,000	X	
Utah	Misc		n/a		1,842	X	
Washington	Custom,SAT,ACT	80,700,16	n/a		2,007	X	
West Virginia	PPST,COMP	172,172,171,17	68	C	2,017	X	
Wisconsin	PPST	—	—	C	2,819		1989
Wyoming	CAT	70%ile	n/a		300	X	
Totals	27		mean = 72%	24, 6, 1		23	4

1. The ACT, CAT, CBEST, COMP, CTBS, PPST, and SAT refer to the American College Testing Program, California Achievement Test, California Basic Education Skills Test, College Outcomes Measures Project, California Test of Basic Skills, Pre-Professional Skills Test, and the Scholastic Aptitude Test, respectively.

2. Scores for the PPST refer to the Mathematics, Reading, and Writing tests respectively. Scores for the NTE refer to the tests of Basic Skills, Communication Skills, and General Knowledge respectively.

3. n/a denotes that passing rates were not available; — denotes that passing rates are not applicable. Passing rates that are provided may be cumulative, per administration, or for the most difficult subtest. See text. Because of the different definitions, the mean value is only approximate.

4. C indicates certification tests; P indicates performance tests; R indicates recertification tests.

5. Number of teacher education program graduates. Data is for the most recent year available.

6. Oklahoma is scheduled to start using the PPST in 1989.

other states by telephone. In April 1987, letters were again sent to directors of testing, this time to obtain updated information and passing rates.

This chapter presents data concerning admissions, certification, recertification, and performance assessment alphabetically by state. Under the heading Admissions Testing, the instrument, history, passing rates, and number of recent graduates are described. The Certification Testing descriptions include who is tested, the instrument, the history, the passing rates, the certification process, and the number of teachers. Under Recertification Testing, program status, who is tested, history, passing rates and number of teachers tested are de-

Table 7. A Summary of State Teacher Certification Programs

State	Test[1]	Coverage			Passing Scores[2]	Pass rate[3]	Other tests[4]	Number of teachers	Emer cert[5]	Implementation	
		basic	prof	subj						in place	when
Alabama	Custom		X	X		85	A	36,000	.2	X	
Arizona	Custom	X	X			78	A	28,895	n/a	X	
Arkansas	NTE		X	X		—	R	24,085	<.1		—
California	CBEST	X				74	A	179,660	3.4	X	
Colorado	—					—	A	29,895	<.1		1987
Connecticut	NTE			X		—	A	32,467	.2		1987
Delaware	PPST	X			175,175,172	69		5,516	5.3	X	
Florida	Custom	X	X	X		85	A,P	86,223	11.6	X	
Georgia	Custom			X		78	P,R	56,321	17.6	X	
Hawaii	NTE	X	X	X	647,651,648	73		9,060	.3	X	
Idaho	NTE	X	X			—		10,160	n/a		—
Illinois	Custom	X		X		—		100,497	n/a		1988
Indiana	NTE	X	X	X	647,653,646	88	A	49,646	.8	X	
Kansas	PPST,NTE	X	X		168,168,170	94		26,260	0	X	
Kentucky	NTE	X	X	X	637,643,641	93	A,P	32,400	<.1	X	
Louisiana	NTE	X	X	X	644,645,645	87	A	46,840	.7	X	
Maine	NTE	X	X			—		12,510	3.3		1988
Maryland	NTE	X	X	X		—		38,029	.7		1987
Massachusetts	—	X		X		—		56,333	.2		1989
Michigan	—	X		X		—		88,000	<.1		1991
Minnesota	PPST	X		X	173,169,172	—		41,444	.2		1988
Mississippi	NTE	X	X	X	639,644,642	88		24,772	4.2	X	
Missouri	—			X		—	A	47,240	4.7		1987
Montana	NTE	X	X		644,648,648	92		22,028	0	X	
Nebraska	PPST				170,171,172	—	A	17,513	<.1		1987
Nevada	PPST	X		X		—	A	7,751	0		1990
New Hampshire	PPST	X			173,174,173	74		10,104	1.3	X	
New Jersey	NTE	X		X	644, – , –	83		72,858	2.7	X	
New Mexico	NTE	X	X	X	645,644,630	88	A	14,200	5.6	X	
New York	NTE	X	X		649,650,646	79		164,900	2.4	X	
North Carolina[6]	NTE	X	X	X	631,636,644	80	A,P	56,084	n/a	X	
North Dakota	—					—	A	8,794	<.1		—
Ohio	—	X	X			—	A	87,729	1.0		1987
Oklahoma	Custom			X		81	A	35,000	1.7		X
Oregon	CBEST	X				80	A	24,413	2.0		X
Pennsylvania	NTE	X	X	X		—		101,150	.2		1987
Rhode Island	NTE	X	X		649,657,648	n/a		7,548	.2		X
South Carolina	NTE,Custom			X		n/a	A,P	36,935	n/a	X	
South Dakota	NTE	X	X	X		—		8,022	1.3		—
Tennessee	NTE	X	X	X	640,644,635	n/a		40,000	n/a	X	
Texas	Custom		X	X		85	A,P,R	185,000	n/a	X	
Virginia	NTE	X	X	X	639,649,639	n/a	P	56,863	0	X	
West Virginia	Custom			X		83	A	22,557	5.9	X	
Wisconsin	—			X		—	A	45,350	2.4		1987
Totals	44	31	24	29	mean = 83%		22, 7, 3			26	18

[1] PPST refers to the Pre-Professional Skills Test, the CBEST refers to the California Basic Education Skills Test.

[2] Passing scores for the PPST are for the Reading, Mathematics, and Writing portions, respectively. Passing scores for the NTE are for the Basic Skills, Communication Skills, and Professional Knowledge portions, respectively.

[3] n/a denotes that passing rates were not available; — denotes that passing rates are not applicable. Passing rates that are provided may be cumulative, per administration, or for the most difficult subtest. See text. Because of the different definitions, the mean value is only approximate.

[4] A denotes admissions tests; P denotes performance tests; R denotes recertification tests.

[5] Percent of teachers with emergency or substandard certification.

[6] In North Carolina, the General Knowledge and Communication Skills tests are required for admission to a teacher preparation program.

scribed. Performance Assessment describes who is tested, the history, the support programs, the program goals, the assessment process, the passing rates, and the number of people assessed.

The biggest gaps in these descriptions deal with passing rates. While several exemplary states with fully implemented programs, including Arizona and Oregon, publish detailed annual reports outlining testing activities and passing rates, others either are not collecting or not reporting this information. One state could not release either the overall passing rate or the passing rate for any skill area. Another was not satisfied with the quality of its data and would not make it public. A third does not know the number of people failing the certification test in the state. These states have had certification testing programs for years, yet were unable or unwilling to provide basic passing rate data.

Many of the states with mandated admissions testing are also not collecting passing rate data. While the mandates stem from the states, the programs are not state programs. The tests are administered and used by the local colleges. Apparently, these states are not making an effort to evaluate this mandated reform.

In addition to differences in levels of reporting, there are also large differences with regard to involvement in teacher testing. Alaska and Iowa do not have plans to implement any form of teacher assessment. Arkansas, Idaho, and Indiana apparently have long-standing mandates that have yet to be implemented. Several of the southern states, including Florida, Kentucky, North Carolina, South Carolina, and Texas, on the other hand, have comprehensive assessment programs involving college admissions, certification, and on-the-job performance.

Admissions Testing Alabama

Status:	In place since November 1981
Coverage:	High school English language skills
Instrument:	Alabama English Language Proficiency Test (ELPT) is given 4 times per year. Candidates may take the examination as many times as necessary.
History:	In 1980 the Alabama State Board of Education mandated an English language examination be developed and implemented as a requirement for entry into teacher education programs. The ELPT was developed and implemented the following year.
Passing Scores:	Scaled score of 70
Passing Rates:	Typically, 80% per test administration
No. of Teacher Education Graduates:	1,900 in 1984
Other Admissions Requirements:	SAT minimum required score is 745; or ACT minimum required score is 16. GPA must be 1.2 on 3.0 scale or 2.2 on a 4.0 scale. Candidates must be interviewed by three faculty members.

Certification Testing Alabama

Status: In place since 1981

Who: Anyone coming into the state seeking initial teacher certification. Individuals changing teaching fields.

Coverage: Subject area skills, professional knowledge

Instrument: Alabama Initial Teacher Certification Exam (AITCE)

History: The program was mandated by the State Board of Education in January 1980.

Passing Scores: Not available

Passing Rates: Approximately 85% per test administration

Certification Process: The basic certificate is valid for 8 years. Continuation of this certificate requires 9 hours of additional credit or 4 years of successful full-time teaching experience, and satisfactory participation in a professional development program.

The Class A certificate is valid for 10 years. It requires a master's degree, completion of an approved graduate teacher education program, and a specified amount of teaching experience. Continuation of this certificate requires 6 additional graduate credit hours or 5 years' experience and satisfactory participation in a professional development program.

The Class AA certificate is the highest certificate offered by the state. A sixth-year program of study is required. Continuation of this certificate requires 6 additional graduate credit hours and satisfactory participation in a professional development program.

Other Certification Requirements: Graduation from an approved teacher education program

No. of Teachers in 1984: 36,000; 74 (.2%) hold emergency certification.

Admissions Testing — Arizona

Status: In place since January 1986

Coverage: Reading, mathematics, writing (multiple choice and essay)

Instrument: Pre-Professional Skills Test (PPST) or alternate basic skills examination approved by the State Board of Education and the Arizona Board of Regents. Arizona Revised Statute 15-533(B).

History: Prior to January 1986, teacher education candidates were required to pass the basic skills component of the Arizona Teacher Proficiency Examination (ATPE) composed of questions assessing skills in reading, mathematics, and grammar. A passing score of 80% for each section was required before admission to any of the state's three colleges of education was approved.

This policy was in effect for 2 years until the Arizona Board of Regents selected the PPST as the basic skills examination required by statute. Post-degree students entering the colleges of education are also required to pass a basic skills examination; however, they have the option of either ATPE basic skills or the PPST.

Passing Scores:

ATPE		PPST	
Reading	80%	Reading	173
Mathematics	80%	Mathematics	172
Grammar	80%	Grammar	174

Passing Rates: In 1986, the average pass rate on the ATPE was 78.9% for first-time examinees. The average pass rate on the PPST was 56%.

No. of Teacher Education Graduates: 2,154 in 1983-84

Other Admissions Requirements: GPA as determined by colleges of education

Certification Testing Arizona

Status:	In place since October 1980
Who:	In-state graduates without PPST scores, emigrant teachers and individuals applying to teach their children at home must take both the basic skills and professional knowledge components of the ATPE. In-state graduates with passingPPST scores only need to take the professional knowledge component.
Coverage:	Basic skills of reading and mathematics and grammar, and professional knowledge
Instrument:	Arizona Teacher Proficiency Examination (ATPE)
History:	During a special session, the 1979 state legislature declared that all new applicants for a basic or standard teaching certificate must pass a basic skills proficiency examination prior to certification. Items were purchased from a contractor and the examination was implemented in October 1980. In December 1980, the State Board of Education directed that a Professional Knowledge (Preservice) component be added to the ATPE Basic Skills. The Professional Knowledge component assesses knowledge of the essential skills that should be learned by a student during a teacher education professional preparation program. The State Board of Education appointed a task force of Board members, college of education faculty, students, teachers, administrators, legislators, and business representatives to find an appropriate test. The NTE was used temporarily until items more applicable to Arizona's needs were purchased from a contractor.
Passing Scores:	Reading - 80%, Mathematics - 80%, Grammar - 80%, Professional Knowledge - 50%
Passing Rates:	In 1985, Basic Skills - 78%, Professional Knowledge - 97%. The pass rate for first-time examinees for all sections was 75.8% in 1985 and 78.9% in 1986.
Certification Process:	Initially, a temporary, nonrenewable certificate is issued and valid for 8 years. At the end of 8 years a teacher must qualify for a standard certificate which is renewable every 6 years. The standard certificate requires a master's degree, 40 upper division or graduate credit hours of coursework and demonstrated classroom proficiency.
No. of Teachers in 1985:	28,895; 986 (3.4%) hold emergency certification.

Certification Testing — Arkansas

Status:	Program not yet implemented
Who:	All candidates for teacher certification
Coverage:	Professional knowledge and specialty area for certification
Instrument:	Portions of NTE
History:	The 1979 state legislature required that all candidates for teacher certification must pass the NTE Common and Area Tests, effective February 1983. The publisher discontinued the common examination, and the mandate has not been implemented. In 1982 the State Board of Education adopted changes in teacher certification, resulting in the current requirements.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	The Standard Certificate is awarded on the recommendation of three colleges of education and is valid for 6 years with a bachelor's degree and 10 years with a master's degree. It can be renewed with 6 credits or 2 years' teaching experience.
No. of Teachers in 1984:	24,085; 6 (.1%) hold emergency certification.

Recertification Testing Arkansas

Status:	In place since March 1985; scheduled to end June 1987
Program Name:	Arkansas Educational Skills Assessment Test (AESAT)
Who:	All certified teachers must pass the exam by June 1987 to qualify for certificate renewal.
Coverage:	Basic reading, writing, mathematics, and subject area skills
History:	The 1983 state legislature initiated a recertification testing option for teachers within the state. During the 1984-85 school year, teachers were required either to demonstrate competence in the subject area in which they were certified or to take 6 credit hours of graduate course work. In 1985 the state legislature extended the recertification requirement to all persons holding teaching certificates and to cover functional academic skills in addition to subject area skills.
Support:	The state department of education, colleges of education and educational television workshops and special training programs. Education loans have also been available for special training.
Passing Scores:	Reading - 70%, Mathematics - 70%, Writing - pass, NTE subject tests - 470-550
Passing Rates:	Not available
No. of Teachers Tested Since 1985:	35,000

Admissions Testing

California

Status:	In place since September 1982.
Coverage:	Basic reading, writing, and mathematics
Instrument:	California Basic Education Skills Test (CBEST) is given six times a year at test centers throughout the state. Candidates may take the examination as many times as necessary.
History:	In 1981 and 1982, legislation was passed requiring students to pass the CBEST in order to receive a teaching certificate effective February 1983. This legislation was amended in 1983 to require that the CBEST be taken for diagnostic purposes by potential applicants to teacher education programs. Applicants are not required by law to pass the test prior to admission, but some colleges or departments of education do require that the test be passed either before program admission or before starting student teaching. In such cases, the passing score is the same as that required to receive a teaching certificate.
Passing Scores:	Passing score for each of the three sections is 41 on a scale of 20 to 80. Individuals can also pass with a total score of 123 if no score is under 37.
Passing Rates:	In 1985-86, 77% of those taking the test for the first time for admission to a professional preparation program passed.
No. of Teacher Education Graduates:	9,562 in 1984

Certification Testing California

Status: In place as of September 1982

Who: Applicants for a first teaching credential and applicants seeking or renewing an emergency credential

Applicants for credentials to teach vocational education, nonacademic subjects in adult education, children's centers, special education centers, and applicants for health services credentials are exempt.

Applicants who have been employed by a school district during the past 39 months and those previously passing theCBEST are also exempt.

Coverage: Basic reading, writing, and mathematics

Instrument: California Basic Education Skills Test (CBEST)

History: The 1970 legislature established a requirement that applicants for a teaching certification must pass an approved subject matter examination or complete an approved subject matter preparation program. Various National Teacher Examination tests were approved for demonstration of subject matter knowledge; these are taken most often by applicants moving from other states.

In 1981 and 1982 legislation was passed and approved requiring that all applicants for initial credentials also demonstrate proficiency in reading, writing, mathematics, and English, with certain identified exemptions. The CBEST was developed as the test required for demonstration of skills proficiency. The legislation also required that the test be passed as a condition for employment in certain situations. These requirements became effective February 1, 1983.

In 1984 legislation was passed and approved which terminated issuance of life credentials after September 1, 1985; life credentials issued prior to that date continue to be valid.

Passing Scores: Passing score for each of the three sections is 41 on a scale of 20 to 80. The passing requirement for the entire test is a score of 123 with no section score lower than 37.

Passing Rates: In 1985-86, 74% of those taking the examination for a teaching credential passed on the first attempt.

Certification Process: Preliminary certification is granted for 5 years after the subject matter, profession preparation, student teaching, and skills proficiency requirements are met. There are reciprocal agreements with several states, and 1-year preliminary credentials may be issued to applicants with credentials from other states with teaching experience. The subject matter and basic skills examination must be passed before the preliminary credential can be extended beyond this 1 year.

A "clear credential" can be issued for 5 years upon completion of a fifth year of college level study, and one-unit course in health education, and an approved course in dealing with exceptional students. The "clear credential" can be renewed automatically every 5 years upon documented completion of 150 hours of staff development.

No. of Teachers in 1985: 179,660; 6,040 (3.4%) hold emergency certification.

Status:	In place since January 1983
Coverage:	Oral language, spelling, language usage/mechanics, mathematics
Instrument:	California Achievement Test (CAT), level 19; students can take the test up to four times.
History:	The policy from 1975 to 1983 permitted schools of education to implement their own testing programs and determine their own passing scores. The 1981 legislature mandated the current uniform basic skills competency testing program.
Passing Scores:	Seventy-fifth percentile for high school seniors

Passing Rates:

	First Attempt	All Other Attempts
Oral language	88.5	87.5
Spelling	69.4	67.5
Language	69.6	67.2
Mathematics	58.2	60.2

These percentages cover June 1, 1985 to May 31, 1986.

No. of Teacher Education Graduates: 2,361 in 1985

Other Admissions Requirements: Candidates must demonstrate competency in oral English by either completing a college-level public speaking course with a B minus or better, or by passing an oral English competency assessment conducted by a panel of three judges. Candidates for teacher education programs must also have graduated in the top 50% of their high school graduating classes, scored 920 or higher on the SAT, scored 19 or higher on the ACT, or have a GPA of 2.5 out of 4.0 in the most recent 30 hours of higher education course work.

Certification Testing Colorado

Status: To be decided by the State Board of Education in 1987

Who: To be decided

Coverage: To be decided

Instrument: To be decided

History: The Educational Quality Act of 1985 (known as the 2 + 2 Program) required a pilot assessment of the quality of teacher and administrator candidates completing education programs and applying for Colorado certification. In the spring and summer of 1986, two instruments were administered on a pilot basis to determine their appropriateness for use in this kind of assessment. The NTE was administered to a voluntary sample of teacher and administrator candidates for certification. The Florida Performance Measurement System was also used with a smaller sample of teacher candidates. These pilot assessments are part of an overall review of teacher preparation and certification requirements being conducted as part of the 2 + 2 Program. This review is expected to lead to recommended changes for State Board consideration during 1987.

Passing Scores: Not applicable

Passing Rates: Not applicable

Certification Process: Effective January 1, 1987, initial certification is provisional and will be valid for 3 years. It requires graduation from an approved teacher education program including 400 hours of student teaching. This certification can be renewed with 6 semester hours of college/university credit.

The General Teacher Certification is valid for 5 years and requires 3 years' satisfactory teaching experience while holding a Provisional Certificate. It can be renewed with 6 semester hours of college/university credit during the 5-year period prior to application for certificate renewal. Up to 4 semester hours may be from approved local inservice programs.

The Professional Teacher Certificate is valid for 5 years and requires a master's degree and 3 years' teaching experience. It can be renewed by earning 6 semester hours of college/university credit during the 5-year period. Up to 4 semester hours may be from approved local inservice programs.

No. of Teachers in 1985: 29,895; 64 (less than 1%) hold emergency certification.

Connecticut

Status:	In place since July 1, 1986
Coverage:	Mathematics, writing, reading
Instrument:	Connecticut Competency Examination for Prospective Teachers (CONNCEPT) consists of three subtests in mathematics, reading, and writing. The mathematics and reading tests are multiple-choice. The writing test requires each prospective teacher to produce a writing sample. A candidate must pass all three tests at the same time. The CONNCEPT is administered three times a year. Individuals who have a total score of 1,000 points on the verbal and mathematics SAT combined with neither subscore below 400 points are exempt from taking the CONNCEPT.
History:	In April 1982 the Connecticut State Board of Education adopted 25 recommendations for ensuring professional competence in the teaching profession. One recommendation endorsed developing a competency examination for prospective teachers as a requirement for admission into a teacher education program. As an outgrowth of these recommendations, the Connecticut Competency Examination for Prospective Teachers (CONNCEPT) Program was implemented to ensure that candidates for teacher preparation programs are competent in skills that are considered essential for prospective and practicing teachers. In 1985, the state legislature mandated the use of the CONNCEPT as a requirement for admission to teacher education programs effective July 1986. Effective May 1987, the CONNCEPT is also required for teacher certification.
Passing Rates:	October 1985 - 54.8% of the first-time test-takers. March 1986 - 56.2% of the first-time test-takers. November 1986 - 55.4% of the first-time test-takers. When the total number who have passed on retaking the examination is included, the pass rate to date is 62.8%.
No. of Teacher Education Graduates:	2,491 in 1984
Other Admissions Requirements:	B- average, specified courses, an essay, letters of recommendation, and an interview

Connecticut

Status:	Implemented May 1987
Who:	All candidates for teacher certification in 24 areas
Coverage:	Subject matter content
Instrument:	The NTE subject area tests are under consideration.
History:	In April 1982, the Connecticut State Board of Education adopted 25 recommendations from the Professional Development Council for ensuring competence in the teaching profession. These recommendations addressed testing for college of education admissions, certification and recertification.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	At present, the Connecticut Provisional Certificate is valid for 10 years and is awarded to graduates of approved teacher education programs. The Standard Certificate requires 30 credit hours or a master's degree and 3 years' experience. Proposed certification changes would provide for 1) an initial educator certificate, 2) a provisional educator certificate, and 3) a professional educator certificate. New teachers in Connecticut will be participating in the state's Beginning Teacher Support and Assessment Program which will provide mentor support and performance assessment.
No. of Teachers in 1984:	32,467; 62 (.2%) hold emergency certification.

Certification Testing

Delaware

Status:	In place since July 1983
Who:	All candidates for first-time teacher certification; individuals with previous certification are exempt.
Coverage:	Basic reading, math, and writing
Instrument:	Pre-Professional Skills Test (PPST) Anyone may take the Pre-Professional Skills Test (PPST) as many times as desired prior to employment. Candidates who fail the PPST can still teach for 1 year. Failure on the PPST will drop the certification status of a newly employed teacher to provisional and result in a loss of pay. Individuals who do not pass in the first year of employment cannot be rehired.
History:	In September 1982, the State Board of Education adopted several regulations governing teacher certification. Accepting the recommendations of the Teacher Competency Study Committee, the Board established the current testing policy.
Passing Scores:	Reading - 175, Math - 175, Writing - 172
Passing Rates:	69% of the applicants from 1983 to 1986 have passed.
Certification Process:	The initial Standard Certificate is valid for 5 years. To obtain this certificate, applicants must have graduated from an approved teacher education program and pass the PPST. Transcripts can be evaluated in lieu of graduating from an approved program. The Professional Status Certificate is issued after 3 years of teaching and is valid as long as the individual is teaching in the same subject area.
No. of Teachers in 1984:	5,516; 294 (5.3%) hold emergency certification.

Admissions Testing Florida

Status:	In place since 1980
Coverage:	Skills assessed by college admissions test
Instrument:	SAT or ACT
History:	Legislation passed in 1978 began a series of reforms in Florida's teacher education and certification programs. The admissions requirement established by that legislation has stayed the same. The state has also adopted certification, master teacher, and performance measurement programs.
Passing Scores:	835 on SAT, or 17 on the ACT (40th percentile of college applicants). Colleges of education are permitted to waive this requirement for 10% of their applicants.
Passing Rates:	Not available
No. of Teacher Education Graduates:	2,170 in 1984
Other Admissions Requirements:	Colleges of education set minimum GPA's based on guidelines provided by the State Board of Education and the State Board of Regents.

Certification Testing

Florida

Status: In place since 1980

Who: Candidates for initial teacher certification

Coverage: Basic reading, mathematics, writing, and professional knowledge: beginning in 1988, subject area test performance will also be required.

Instrument: Florida Teacher Certification Examination, (FTCE)

In 1988, the basic reading, mathematics, and writing requirement will be completed through the College Level Academic Skills Test (CLAST).

There is no limit to the number of times an applicant can take the FTCE examination.

History: Starting in 1978 the Florida legislature initiated a number of changes in teacher assessment. Beginning in 1980, prospective teachers had to demonstrate competency in basic skills and professional knowledge through the FTCE. Beginning in 1988, they must also demonstrate competency on a written subject area examination in addition to basic skills knowledge (the latter assessed through CLAST). Approximately 50 academic subject area tests are presently being developed.

Passing Scores: Reading - 200, Writing - 6, Math - 200, Professional Knowledge - 200

Passing Rates: 85% of first-time test-takers in 1986

Certification Process: Graduates of approved teacher education programs or college graduates completing specific course work are eligible for temporary teaching certificates.

Regular certification requires a passing FTCE score and successful completion of the state's Beginning Teacher Program. The Beginning Teacher Program involves teaching for 1 year with supervision and evaluation, and demonstrating competencies through a performance measurement system. The certification is valid for 5 years and requires 6 additional credit hours for renewal.

No. of Teachers in 1984: 86,223; 10,000 (11.6%) hold emergency certification.

Performance Testing

Florida

Status:	In place since July 1982
Program Name:	The Beginning Teacher Program
Who:	All beginning teachers, regardless of where they receive their training
Coverage:	The Florida Performance Measurement System, the FPMS, covers 36 competencies in planning, management of student conduct, instructional organization and development, presentation of subject matter, verbal and nonverbal communication, and evaluation.
History:	Beginning with 1978 legislation, Florida has initiated a number of teacher training and certification requirements. The legislation mandated a beginning teacher program providing support and development for new teachers. In response to the legislation, a coalition of state school districts and universities developed the FPMS. All the state school districts, except Dade County, have adopted the instrument to meet the legislative mandate. In 1986, the state judicial system upheld the use of the test.
Process:	Beginning teachers are observed by a team comprised of a peer teacher, the principal, and one other professional.
Passing Scores:	The passing scores for the FPMS vary as a function of student characteristics. The scoring algorithm is not publicly available.
Passing Rates:	99.5%
No. of Teachers Evaluated in 1985:	7,806

Georgia

Status: In place since September 1978. Expanded program implemented in July 1986.

Who: Applicants for initial teacher certification (1978) Applicants for certification renewal (1986)

Coverage: Each of the 28 tests for specific certification fields is a criterion-referenced test that assesses an individual's competence with regard to a specific set of performance objectives. These performance objectives measure the subject matter content that practicing Georgia educators most often use in teaching students in the classroom.

Instrument: Teacher Certification Test (TCT)

History: In 1972 the State Board of Education initiated the design of a performance-based certification program to develop criterion-referenced tests for certification fields that would assess an individual's content field knowledge. Performance objectives for each test were developed and reviewed by Georgia educators and panels of content experts for their relevance and job relatedness. Test items that measure each performance objective were carefully reviewed by Georgia Department of Education and content experts to ensure accuracy and reasonableness. These reviews are ongoing. The TCT was first required for applicants seeking initial certification after September 1, 1978. The program was expanded via State Board of Education policy in 1981 to require the TCT to add a field to an existing professional certificate. The program was expanded via legislation to require the TCT for certification renewal purposes beginning July 1, 1986.

Passing Scores: Not available

Passing Rates: 1981-1986 cumulative averages:
78% for first-time test-takers
69% for individuals retaking the test
88% overall

Certification Process: A passing score on the appropriate TCT is necessary in order to receive a Georgia certificate. However, at the request of an employing superintendent, an initial certificate, valid for 1 year, may be issued without a passing score on the test. The test must be passed and other Georgia special requirements must be met during this initial year of certification, to continue certification beyond the initial 1 year. After posting a passing score on the TCT and meeting all applicable special Georgia requirements, an applicant is eligible for certification for up to 3 years. During the 3 years, the applicant must meet on-the-job assessment requirements necessary to convert to a professional, renewable certificate, valid for 5 years.

No. of Teachers in 1984: 56,321;
9,900 (17.6%) hold emergency certification (includes individuals with temporary certification who have not yet taken the certification and/or performance test.)

Performance Testing Georgia

Status: In place since May 1980

Program Name: Teacher Performance Assessment Instrument (TPAI)

Who: All teachers seeking initial certification in Georgia. Applicants have 3 years to pass the test.

Coverage: The TPAI covers 14 competencies that are observed through 45 indicators. The competencies cover interpersonal skills, teaching plans, and classroom procedures.

History: The 1970 monograph, *Goals for Education in Georgia*, encouraged the use of demonstrated competencies as a certification requirement. In 1972, the State Board of Education initiated the design of a performance-based certification program. A contract was awarded to the University of Georgia in 1976 to develop the current instrument. Between 1977 and 1984, the TPAI was refined through four editions, with evolving competencies and indicators. The requirement that applicants seeking initial certification in Georgia must complete an assessment of on-the-job performance became effective May 1, 1980 and continues as the final requirement for a professional renewable teaching certificate in Georgia.

Process: Applicants for initial certification in Georgia who have met all their certification requirements are issued a nonrenewable certificate valid for 3 years. During this 3-year period, they must meet performance requirements on all eight competencies of the TPAI. There are two assessment periods each year, fall and spring, providing each applicant up to a maximum of six assessment opportunities to meet the performance requirements. Teachers are assessed by the principal or other administrator, a peer teacher, and an external data collector from one of the state's Regional Assessment Centers.

Upon demonstration of all eight competencies, if all other certification requirements have been met, a performance-based certificate is awarded. This is a professional, renewable certificate valid for 5 years, which may be renewed by earning 10 quarter hours of appropriate college credit or local staff development credit during the validity period.

Passing Scores: Performance requirements on all eight competencies must be met. Mastery of a competency is considered to have been met if, in a single assessment, 85% of the competencies are at or above the minimum performance levels; or if, on two consecutive assessments, 75% of the competencies are at or above the minimum performance level.

No. of Teachers Evaluated in 1985: The passing rate for 1985 and the number of assessments required were:

After first assessment	808
After second assessment	1,192
After third assessment	305
After fourth assessment	135
After fifth assessment	36
After sixth assessment	16
Total completing assessment requirement	2,492

Number of teachers who did not meet proficiency after 6 assessment opportunities - 5

Number of teachers requiring additional assessment opportunities - 1,130

Recertification Testing — Georgia

Status:	In place since July 1986
Program Name:	Teacher Certification Test (TCT)
Who:	All teachers whose certification expired after July 1, 1986. Teachers whose certificates expire in 1986 have been given 1 year to pass the exam. Individuals passing the TCT as a certification examination do not have to take the test again.
Coverage:	Each of the 28 tests for specific certification fields is a criterion-referenced test which assesses an individual's competence with regard to a specific set of performance objectives. These performance objectives measure the subject matter content that practicing Georgia educators most often use in teaching students in the classroom.
History:	In 1972 the State Board of Education initiated the design of a performance-based certification program to assess an individual's content field knowledge. Performance objectives for each test were developed and reviewed by Georgia educators and panels of content experts for their relevance and job relatedness. Test items that measure each performance objective were carefully reviewed by Georgia Department of Education and content experts to ensure accuracy and reasonableness. These reviews are ongoing. The TCT was first required for applicants seeking initial certification after September 1, 1978. The program was expanded via State Board of Education policy in 1981 to require the TCT to add a field to an existing professional certificate. The program was expanded via legislation to require the TCT for certification renewal purposes beginning July 1, 1986.
Passing Scores:	Not available
Passing Rates:	Individuals have 2 years to pass, and the program has only been in place 1 year. No one had been denied renewal as of December 1986.
No. of Teachers Tested in 1986:	4,487; 5,000 expected each subsequent year

Certification Testing

Hawaii

Status:	In place since September 1986
Who:	Applicants for initial certification
Coverage:	Basic reading, mathematics, writing, and subject area skills
Instrument:	NTE Core Battery and certain subject area tests
History:	In 1984 the State Superintendent mandated the use of theNTE for certification.
Passing Scores:	General Knowledge - 647, Communication Skills - 651, Professional Knowledge - 648
Passing Rates:	On October 1986, 73% of the 1,092 applicants passed the entire Core Battery.
Certification Process:	After graduation from an approved program and passing theNTE, a 2-year initial certificate is awarded. A Basic Certificate, valid for life, is awarded after 2 years of successful teaching in Hawaii. A Professional Certificate requires a fifth year of teacher education or a master's degree in teacher education and 2 years' successful teaching experience in Hawaii. It is valid for life.
No. of Teachers in 1986:	9,060; 29 (.3%) hold emergency certification.

Certification Testing Idaho

Status:	To be implemented by September 1988 pending appropriation of funds by the state legislature.
Who:	Applicants for teaching certificates in Idaho. Certified teachers will be exempt.
Coverage:	Basic reading, mathematics, and writing
Instrument:	NTE Core Battery
History:	The Idaho Professional Standards Commission has been studying the issue of teacher testing for the past 2 years. In June 1986, the commission recommended that the Idaho State Board of Education adopt the NTE Core Battery as a criteria for certification. The State Board of Education will consider the Commission's proposal in Spring 1987.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	The standard certificate is valid for 5 years. A master's degree or a fifth year of education is required for the advanced certificate, which is valid for 5 years. Teachers must take additional coursework to be recertified.
No. of Teachers in 1984:	10,160; 21 (.2%) hold emergency certification.

Certification Testing Illinois

Status:	To be implemented in July 1988
Who:	Applicants for early childhood, elementary, special, high school, school service personnel and administrative certificates
Coverage:	Basic skills in reading, writing, grammar, mathematics, and subject matter area
Instrument:	The state is custom designing the Illinois Certification Testing System which will include 53 subject area tests in addition to the test of basic skills.
History:	The state's Education Reform Act of 1985 specified the above requirements. The state is currently developing and pilot testing instruments. The pilot administration is scheduled for April 1987.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	The Standard Certificate requires satisfactory completion of an approved teacher education program and is renewable every 5 years.
No. of Teachers in 1984:	100,497; the number of teachers with emergency certification is not available.

Admissions Testing

Indiana

Status:	Not yet implemented
Coverage:	Proficiency in basic skills
Instrument:	Not yet determined
History:	In February 1984, the state General Assembly specified testing for basic skill proficiency as a requirement for admission to teacher education programs. This requirement has not yet been implemented.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
No. of Teacher Education Graduates:	3,750 in 1984
Other Admissions Requirements:	Colleges of education establish their own minimum GPA's.

Certification Testing — Indiana

Status:	Core Battery in place since July 1, 1985; Specialty Area Exams in place since July 1, 1986.
Who:	Applicants for initial teacher certification
Coverage:	General knowledge, communication skills, professional, and subject area knowledge
Instrument:	NTE and Indiana Tailored Testing Program
History:	The February 1984 State General Assembly specified that the State Commission on Teacher Training and Licensing may not grant an initial standard certificate to any person who has not demonstrated the proficiencies listed above. At the request of the State Board of Education, area testing has been postponed to permit development of instruments for areas not covered by the NTE. Cutoff scores for Specialty Area Tests will be available after January 17, 1987.
Passing Scores:	General Knowledge - 647, Communication Skills - 653, Professional Knowledge - 646
Passing Rates:	Based on the first 4 administrations of the Core Battery, 88% passed.
Certification Process:	Upon graduation from an approved teacher education program and passing the Core Battery of the NTE and appropriate specialty area tests, an Initial Certificate is awarded. This certificate is valid for 5 years and can be renewed for another 5 years with 6 credit hours or 90 Certification Renewal Units.
No. of Teachers in 1984:	49,646; 487 (.8%) hold emergency certification.

Certification Testing Kansas

Status:	In place since May 1986
Who:	All applicants for initial teaching certificates
Coverage:	Basic skills and professional knowledge
Instrument:	Pre-Professional Skills Tests (PPST) (reading, mathematics, and writing). NTE Professional Knowledge Test.
History:	In May 1984 the state legislature established a testing requirement for initial teaching certification. Validation and standard-setting studies were conducted and the State Board of Education adopted the current requirements. State universities and some private colleges require all or part of the PPST for entry into teacher education programs. Kansas is in the second stage of a four-stage process for the development of an internship program for first-year teachers. Current plans call for implementation July 1, 1989.
Passing Scores:	PPST: Reading - 168, Math - 168, Writing - 170 NTE: Professional Knowledge - 642
Passing Rates:	The test was administered on four occasions in 1986. The following are pass rates for 1986 examinees who took the tests at Kansas testing centers: PPST reading, 94.8%; PPST math, 94.7%; PPST writing, 98.2%; NTE Professional Knowledge, 97.2%. Of those individuals taking all four parts of the test and reporting their scores to the Kansas State Department of Education, 94% passed.
Certification Process:	An initial certificate is awarded to applicants who satisfactorily complete a state approved teacher education program, receive a recommendation from a state approved teacher education institution, have 2.5 GPA on a 4.0 scale, and pass the state pre-certification examination. This certificate is valid for 3 years.
No. of Teachers in 1984:	26,260; 0 (0%) hold emergency certification.

Admissions Testing

Kentucky

Status:	In place since 1981
Coverage:	High school mathematics and English
Instrument:	Comprehensive Test of Basic Skills (CTBS)
History:	In 1981, the State Department of Education adopted a recommendation of the Kentucky Council on Teacher Education concerning minimum achievement test score levels in literacy and mathematics and a minimum 2.25 GPA for admission into teacher education programs. In 1985 the state established new requirements for admission to colleges of teacher education. Besides the old requirement of a minimum achievement test score, students need a GPA of 2.5 in their major and 2.5 in professional course work.
Passing Scores:	12.5 grade equivalent score on spelling, reading, mathematics, and language arts.
Passing Rates:	As of November 1986, 63.9% passed spelling, 65.2% passed reading, 63.3% passed mathematics, and 65.3% passed language arts.
No. of Teacher Education Graduates:	1,200 in 1984
Other Admissions Requirements:	Minimum GPA of 2.5 in applicant's major areas of study, 2.5 in professional course work, and 2.5 overall

Certification Testing

Kentucky

Status:	In place since January 1, 1985
Who:	All applicants for initial certification
Coverage:	General knowledge, communications skills, professional knowledge, and area of specialization
Instrument:	NTE
History:	In 1984, legislation was passed establishing the current testing program. A 1-year internship program for beginning teachers, including assessment and assistance, was established at the same time.
Passing Scores:	General Knowledge - 637, Communication Skills - 643, Professional Knowledge - 641
Passing Rates:	Approximately 93% of those taking the exam in 1985 passed.
Certification Process:	Upon successful completion of an approved program of preparation and passing the NTE Exam and the internship, applicants are awarded an initial certificate, valid for 5 years. This certificate can be renewed for a 5-year period upon completion of half the requirements of a fifth-year program or master's degree. Teachers cannot teach beyond 10 years without a master's degree. With a master's degree, teachers can obtain a Standard Certificate which must be renewed every 5 years based on teaching experience or additional coursework.
No. of Teachers in 1984:	Approximately 32,400; 15 (.1%) hold emergency certification.

Performance Testing

Kentucky

Status:	In place since January 1985
Program Name:	The Kentucky Beginning Teacher Internship Program (KBTIP)
Who:	All beginning teachers and out-of-state teachers with less than 2 years appropriate experience
Coverage:	Kentucky uses the Florida Performance Measurement System which covers the following areas: planning, management of student conduct, instructional organization and development, presentation of subject matter, verbal and nonverbal communication, and evaluation.
History:	The Kentucky General Assembly in early 1984 adopted legislation requiring a 1-year internship for beginning teachers. The requirement applies to all teachers applying for certification on or after January 1, 1985, and out-of-state teachers with less than 2 years of appropriate experience. The internship program consists of supervision assistance and assessment components. The assessment aspect of the system uses the Performance Measurement System developed in the State of Florida.
Process:	Beginning teachers are observed during nine scheduled observations by three trained observers. Each observer, including a mentor teacher, the principal, and a teacher educator, visits the classroom three times during the year. Observers receive 18 hours of observation training including paper and pencil test and a coding test. As of 1986, 9,000 observers had successfully completed training.
Support:	Beginning teachers receive feedback and continuing support from mentor teachers paid to work with the intern outside classroom hours.
Passing Scores:	There is no pass/fail scoring. Each three-member beginning teacher committee makes a professional judgment about whether the intern should receive certification.
Passing Rate:	97% of all beginning teachers in 1985-86 were recommended for continuing certification.
No. of Teachers Evaluated in 1985:	755 beginning teachers

Admissions Testing — Louisiana

Status:	In place since fall 1985
Coverage:	Communication skills, general knowledge
Instrument:	Portions of the NTE
History:	The 1984 state legislature mandated that beginning with the 1985 fall semester applicants entering a teacher education program must take a standardized teaching aptitude test. In August 1984, the deans of colleges of education that offer teacher education programs in Louisiana met and selected the General Knowledge and Communications Skills portions of the NTE.
Passing Scores:	General Knowledge - 644, Communication Skills - 645
Passing Rates:	Not collected
No. of Teacher Education Graduates:	1,820 in 1984

Certification Testing Louisiana

Status:	In place since 1978
Who:	Applicants for initial teacher certification
Coverage:	General knowledge, communication skills, professional knowledge, and area of specialization
Instrument:	NTE
History:	In 1977 the state legislature mandated that applicants for initial teacher certification are required to pass an examination that includes English proficiency, pedagogical knowledge, and knowledge in their area of specialization. The superintendent, charged with selecting an instrument, chose the NTE. In 1981, the legislature provided that applicants who score within 10% of the passing score may be employed by a school district on an emergency basis. In 1982, the State Board of Elementary and Secondary Education provided that applicants who pass three out of four parts of the NTE required for certification and whose aggregate score is equal to or greater than the total required on all four parts may be employed by a school district on an emergency basis.
Passing Scores:	General Knowledge - 644, Communication Skills - 645, Professional Knowledge - 645
Passing Rates:	87% in 1985
Certification Process:	Candidates for initial certification must graduate from an approved program of study and pass the NTE. The initial certificate, valid for 3 years, may be renewed with an additional 6 credit hours or at the request of a superintendent of schools if the teacher has taught in the previous 5 years. The Type B certificate requires 3 years of teaching experience in the certified field and is valid for life for continuous service. The Type A certificate requires a master's degree and 5 years of teaching experience. This certificate is valid for life for continuous service.
No. of Teachers in 1984:	46,840; 315 (.7%) hold emergency certification.

Maine

Status:	To be implemented by July 1988
Who:	Applicants for initial teacher certification. Applicants certified in another state. Individuals whose Maine certification has lapsed more than 5 years.
Coverage:	General knowledge, communication skills, and professional knowledge
Instrument:	NTE Core Battery
	Applicants may take the examination as often as desired beginning at the end of their sophomore year of college.
History:	The Maine Education Reform Act of 1984 requires that a provisional teacher certificate be issued only to applicants who have taken and passed a qualifying examination.
	In preparation for implementation, all applicants have been required to take the NTE since September 1985. The actual test and qualifying scores will be selected by December 1987. The program is to be implemented by July 1988.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	Valid for 5 years, the Provisional Certificate requires 6 credit hours to be renewed.
	Valid for 10 years, the Professional Certificate requires 30 credit hours and 4 years of teaching experience. This certificate will not be available after 1988.
	The state is experimenting with alternate certification routes to attract professionals from other fields into teaching.
No. of Teachers in 1984:	12,510; 400 (3.3%) hold emergency certification.

Certification Testing

Maryland

Status:	To be implemented by July 1, 1987
Who:	Applicants for initial teacher certification
Coverage:	General knowledge, communication skills, professional knowledge, and specialty area
Instrument:	NTE Core Battery and Specialty Area Tests
History:	In 1984 the State Department of Education conducted a validity study of the NTE Core Battery and 20 Specialty Area Tests. As of April 1986, the State Board of Education required applicants for teacher certification to take the test on a no-fault basis in order to gather data for determining appropriate qualifying scores. In June 1987, the state will announce the passing scores that will go into effect July 1, 1987.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	Valid for 5 years, the Standard Certificate can be renewed once. After 10 years, teachers must obtain an Advanced Professional Certificate which requires 3 years of successful teaching and 30 credit hours, a master's degree, or inservice training.
No. of Teachers in 1984:	38,029; 250 (.7%) hold emergency certification.

Certification Testing Massachusetts

Status:	To be implemented by 1989
Who:	Applicants for initial teacher certification
Coverage:	Communication, language skills, and subject areas
Instrument:	To be decided
History:	In 1975 the State Advisory Commission on Educational Personnel began a 4-year study and series of public meetings concerning teacher certification. They recommended a shift from basing certification on an approved program of study to an emphasis on acquiring and demonstrating competencies. In 1979 the State Board of Education adopted the recommendations of the Advisory Commission. Demonstrated competency as a teacher, e.g. student teaching or satisfactory teaching experience, became a certification requirement starting in September 1982. In 1985 the state legislature mandated a testing program for teacher certification. The State Department of Education is currently investigating various instruments. The target date for implementation is 1989.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	Upon graduation from an approved program of study, an applicant is awarded permanent certification. The state intends to implement a program which provides for a 2-year provisional certificate. New teachers will receive inservice training and evaluation during the initial 2 years.
No. of Teachers in 1984:	56,333; 125 (.2%) hold emergency certification.

Certification Testing — Michigan

Status: To be implemented September 1991

Who: Individuals seeking teacher certification

Coverage: Basic skills and subject area knowledge

Instrument: Not yet developed

History: In 1983-84, several bills were introduced in the state legislature to revise certification requirements. These bills lapsed in 1985. Thirteen of them were reintroduced and were pending in the 1986 legislature. The legislature passed, and the Governor signed in December 1986, a bill mandating that by September 1, 1991, individuals must pass a basic skills examination in order to receive a teaching certificate. By September 1, 1993, they would have to pass both basic skills and subject area examinations. The bill further prescribes that by June 1, 1987, the state is to provide teacher education institutions with guidelines and criteria, approved by the State Board, for basic skills and subject area examinations.

Passing Scores: Not applicable

Passing Rates: Not applicable

Certification Process: A Provisional Certificate is valid for 6 years and can be renewed twice. The first renewal is valid for 3 years and requires 10 credits. The second renewal is also valid for 3 years and requires 18 credits. The Continuing Certificate, valid for life, requires 18 credits and 3 years of successful teaching experience. Continuing Certificates issued after September 1, 1989 shall be renewed every 5 years.

No. of Teachers in 1984: 88,000; 74 (.1%) hold emergency certification.

Certification Testing

Minnesota

Status:: To be implemented April 1988

Who: New teachers and current teachers seeking additional licensure fields

Coverage: Reading, writing, mathematics, and subject area

Instrument: Pre-Professional Skills Test (PPST) for basic skills; content area tests are undecided.

History: In 1985 the state legislature required examinations in the basic skills and subject area content for new teachers and examinations in subject areas for currently licensed teachers endorsing additional teaching skills beginning April 1988. The law required that the Board of Teaching adopt proposed examinations that have been validated by another state or a reputable national testing organization by September 1986.

The Board chose the PPST for the basic skills test and is working toward the selection of content area tests. As of December 1986, funding had not been provided to implement the provision for subject area tests.

Passing Scores: Reading - 173, Writing - 172, Mathematics - 169

Passing Rates: Not applicable

Certification Process: The initial license, valid for 2 years, requires completion of a baccalaureate degree, completion of an approved teacher education program including student teaching, passing scores on the examinations, and a recommendation by an approved institution of higher education. Advancement to a continuing license is contingent upon applicants' completing an approved Minnesota human relations program and 1 year of teaching experience during the 2-year period. Applicants not acquiring 1 year of teaching experience during the 2-year period are eligible for additional 2-year licenses until the experience requirement is met.

Currently, continuing licenses are valid for 5 years with renewal contingent upon completing 120 continuing education renewal units within each 5-year period.

No. of Teachers in 1986: 41,444 full-time-equivalent teachers practicing in public schools.

Admissions Testing Mississippi

Status:	In place since July 1986
Coverage:	Speaking, writing, subject area tests
Instrument:	College Outcome Measures Project (COMP) which includes 10 subject areas. All students in state-supported institutions of higher learning who seek to enter a teacher preparation program are required to take the speaking and writing portions of the COMP. Students with a grade point average of 3.2 out of 4.0 or an ACT score of 18 are exempt from taking the other 8 COMP areas.
History:	The state Educational Reform Act of 1982 specified testing as a requirement for admission to teacher education programs in public colleges. Until 1986, colleges of education were able to choose their own instruments and set their own passing scores.
Passing Scores:	COMP Writing - 17 Speaking - 17 Composite - 170 (if required)
Passing Rates:	Not available
No. of Teacher Education Graduates:	1,689 in 1984
Other Admissions Requirements:	GPA of 2.5 or higher

Certification Testing

Mississippi

Status:	In place since 1975
Who:	Applicants for initial teacher certification
Coverage:	General knowledge, communication skills, professional knowledge, and content area
Instrument:	NTE and Specialty Area Tests
History:	The NTE has been required in Mississippi since 1975. In 1982, the State Department of Education specified new minimum scores that went into effect in July 1986.
Passing Scores:	General Knowledge - 639, Communication Skills - 644 Professional Knowledge - 642, Specialty Area Tests - 470-520
Passing Rates:	In 1985-86, 88% of the college seniors passed.
Certification Process:	The Class A Certificate is awarded upon successful completion of an approved program of studies and passage of the NTE. This certificate is valid for 5 years. The Class AA Certificate is valid for 10 years and requires a master's degree and 2 years of teaching experience. The Class AAA Certificate is valid for 10 years and requires a specialist degree or 45 hours above the master's degree, and 3 years of teaching experience. The Class AAAA Certificate is valid for life and requires a Ph.D. and 5 years' teaching experience.
No. of Teachers in 1984:	24,772; 1,031 (4.2%) hold emergency certification.

Admissions Testing Missouri

Status:	In place since July 1983
Coverage:	Skills assessed by college admissions tests
Instrument:	SAT or ACT Candidates not meeting the requirements are permitted to retake the college admissions tests.
History:	In May 1981, the Missouri State Board of Education mandated the implementation of a testing program for admission into teacher education programs. Starting in 1981, all colleges of education were required to collect SAT and ACT data in order to provide information for establishing passing scores. Standards, established in 1983, became effective in 1984. The state Excellence in Education Act of 1985 mandated exit examinations by 1988, and reaffirmed the current standards until that time.
Passing Scores:	SAT - 800 or ACT - 18
Passing Rates:	Not available
No. of Teacher Education Graduates:	2,758 in 1984
Other Admissions Requirements:	GPA of 2.5

Certification Testing

Missouri

Status: To be implemented in 1987

Who: Prospective college of education graduates seeking high school teacher certification

Coverage: Subject area tests

Instrument: To be decided

History: The 1984 legislature approved a bill that requires all students finishing teacher education programs and seeking certification to teach in high schools to demonstrate competence in the subject matter they intend to teach. The bill also provides authority to place on probation and terminate colleges of education whose graduates fail to perform adequately on nationally normed tests.

Passing Scores: Not applicable

Passing Rates: Not applicable

Certification Process: Graduates of approved teacher education programs are currently certified for life. The 1984 legislation authorized the State Board of Education to establish standards and to replace lifetime certification.

No. of Teachers in 1984: 47,240; 2,200 (4.7%) hold "temporary" certification. Missouri doesn't issue "emergency" certification.

Certification Testing

Montana

Status:	In place since July 1986
Who:	Candidates for initial teacher and administrator certification and reinstatement of lapsed certificates
Coverage:	General knowledge, communication skills, and professional knowledge
Instrument:	NTE Core Battery
History:	In 1986, after a 1-year validation study, the State Board of Public Education mandated the current testing requirement.
Passing Scores:	General Knowledge - 644, Communication Skills - 648, Professional Knowledge - 648
Passing Rates:	92% (based on score reports received for 800 examinees since July 1986)
Certification Process:	The nonrenewable Provisional Certificate is based on a bachelor's degree for teaching and a master's degree for administration. Of the Provisional Certificate holders, approximately 67% represent academically qualified, out- of-state applicants who do not meet the state's recent credit requirement. This valid certificate is not an "emergency" certificate. In emergency situations school districts may receive an authorization to employ a noncertified teacher. The Standard Certificate is based on a bachelor's degree and is valid for 5 years. It is renewable with 6 credit hours and 1 year of teaching experience. The Professional Certificate is based on a master's degree or college approved fifth year program, and verification of 3 years of teaching experience. It is a 5-year certificate and is renewable with 1 year of teaching experience. The Administrative Certificate is based on a master's degree in school administration, plus state specified course work, appropriate experience and eligibility for the Professional Teaching Certificate. It is a 5-year certificate and is renewable with 1 year of teaching or administrative experience.
No. of Certified Personnel in 1984:	22,028; 0 (0%) hold emergency certification.

Admissions Testing Nebraska

Status:	In place since Spring 1987
Coverage:	Basic skills
Instrument:	Pre-Professional Skills Test (PPST)
History:	In 1984, the state legislature established competency examinations as a requirement for admission to teacher certification. While the 1985 academic year was targeted for implementation, funds were not appropriated for test development or validation efforts. The state legislature extended the deadline until July 1987. The State Board of Education proceeded with an investigation of admissions testing. Between October and December 1984, the Professional Personnel Testing Committee met four times. They suggested the PPST was the best available way to meet the statute. A validation study considering the PPST was then prepared and presented in June 1986. Passing scores were selected in September 1986.
Passing Scores:	Reading - 170 Mathematics - 171 Writing - 172
Passing Rate:	Not applicable
No. of Teacher Education Graduates:	2,253 in 1984
Other Admissions Requirements:	All of the state's 15 colleges of education require a 2.5 GPA in the student's major area of study.

Certification Testing Nebraska

Status:	To be implemented Spring 1989
Who:	Candidates for initial teacher certification and prospective graduates of teacher education programs. Students passing the examination for admission are exempt from taking the examination for certification.
Coverage:	Basic Skills
Instrument:	Pre-Professional Skills Test (PPST)
History:	The 1984 legislature established competency examinations as a requirement for admission to teacher education programs and for teacher certification. While the 1985 academic year was targeted for implementation, funds were not appropriated for test development or validation efforts. The state legislature extended the deadline until July 1987.
Passing Scores:	Reading - 170, Writing - 172, Mathematics - 171
Passing Rates:	Not applicable
Certification Process:	The state is in the process of examining and possibly adopting new certification standards.
No. of Teachers in 1984:	17,513; 6 (less than .1%) hold emergency certification.

Admissions Testing Nevada

Status:	In place since fall 1986
Coverage:	Basic reading, writing, mathematics skills
Instrument:	Pre-Professional Skills Test (PPST)
History:	The State Board of Education has been interested for some time in a plan to assess the qualifications of new personnel coming into Nevada's schools. In October 1984 the board accepted the basic skills and subject matter testing components of a competency assessment proposal presented by the Commission on Professional Standards. In December 1984 the board accepted the recommendation of the State Department of Education that the Pre-Professional Skills Tests (PPST) be adopted as a basic skills test in Nevada and directed that a validation study of these tests be undertaken. The board also adopted the Professional Development Center approach to provide special assistance to first-year teachers.
Passing Scores:	Reading - 169, Mathematics - 169, Writing - 170
Passing Rates:	Based on 510 Nevada students taking the test as part of the validation study between 1984-85, 96% would have passed the reading test, 95% would have passed the mathematics portion, and 98% would have passed the writing portion.
No. of Teacher Education Graduates:	258 in 1984
Other Admissions Requirements:	The two universities in Nevada require a 2.5 GPA in the student's major area of study.

Certification Testing Nevada

Status:	To be implemented in Spring 1990
Who:	Applicants for initial certification as teachers administrators, and other specified personnel
Coverage:	Basic skills, professional knowledge, and subject matter tests
Instrument:	Basic Skills - Pre-Professional Skills Test (PPST). Professional Skills - to be developed. Subject matter - to be developed.
History:	In preparation for implementing a testing program, the State Department of Education recently conducted an investigation into the available options for basic skills, professional, and subject matter testing. An internal panel consisting of 18 department staff reviewed subject matter tests developed by major test companies. In addition, telephone interviews were conducted with personnel responsible for teacher assessment in 10 other states to learn of their experiences and policies associated with their efforts.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
Certification Process:	To receive a certificate, an applicant must have graduated from an accredited college or university with a bachelor's degree; completed course work or passed a state administered equivalent examination in Nevada School Law, the Nevada Constitution, and the U.S. Constitution; and completed course work in two of the following areas: Multicultural Education, Exceptional Children, Counseling and Guidance with emphasis on parental consultation. The two areas are to be completed either before initial certification or during the first renewal period. The Department of Education offers the following types of certificates: Standard Elementary, Professional Elementary, Standard Secondary, Professional Secondary, Special, Provisional.
No. of Teachers in 1985:	7,751; 0 (0%) hold emergency certification.

Certification Testing — New Hampshire

Status:	In place since December 1985
Who:	All candidates for initial teacher certification
Coverage:	Basic reading, writing, and mathematics
Instrument:	Pre-Professional Skills Test (PPST). Applicants who fail any part of the examination must retake and pass all three parts of the test. The test can be taken as often as desired.
History:	In April 1984, the State Board of Education established the current requirement for passing the PPST.
Passing Scores:	Reading - 173, Mathematics - 174, Writing - 175
Passing Rates:	Reading - 80%, Mathematics - 74%, Writing - 75% since December 1985.
Certification Process:	The Beginner Certificate is valid for 3 years. Requiring 3 years' experience, the Experienced Educator Certificate is renewable, based on at least 50 hours of inservice work every 3 years.
No. of Teachers in 1984:	10,014; 130 (1.3%) hold emergency certification.

Certification Testing New Jersey

Status:	In place since Spring 1985
Who:	All candidates for certification including those seeking initial certification, certified teachers who apply for additional endorsement, teachers certified in other states, and seniors in approved teacher education programs.
Coverage:	General knowledge and content areas
Instrument:	NTE
History:	In 1985 the New Jersey Board of Education passed proposals requiring applicants for secondary teaching certification to pass content area tests of the NTE and applicants for elementary and/or nursery education certification to pass the NTE General Knowledge Test of the Core Battery.
Passing Scores:	In February 1986, passing scores were raised for all subject area tests. The passing score for the NTE General Knowledge test was raised from 642 to 644.
Passing Rates:	Vary with specialty area. The overall pass rate in 1986 was 82.9%. In 1985, with different passing scores, 89% passed.
	Certification Permanent certification is granted after applicants Process: successfully complete an approved program, or receive a recommendation or a transcript evaluation.
No. of Teachers in 1984:	72,858; 2,000 (2.7%) hold emergency certification.

Admissions Testing New Mexico

Status:	In place since July 1983
Coverage:	Basic reading, writing, mathematics
Instrument:	Decided upon by individual institutions
History:	In 1980 the state legislature appropriated a limited amount of funds to conduct an accountability study concerned with student and teacher performance. In 1981 the State Board of Education initiated the current requirement, which went into effect in 1983, that a test must be given prior to admission to a state college of education. The colleges of education establish the instrument to be used and the passing score(s), subject to State Board of Education approval.
Passing Scores:	Varies by college
Passing Rates:	Not collected
No. of Teacher Education Graduates:	Not available

New Mexico

Status: In place since July 1, 1983

Who: All applicants seeking initial teacher and administrator certification

Coverage: General and professional knowledge, communication and subject matter skills

Instrument: NTE Core Battery and Specialty Area Tests

History: In 1981 the State Board of Education voted to require that after July 1, 1983, individuals seeking initial certification in the state must successfully complete an examination of general education, communication skills and teaching methods and practices. Effective July 1, 1984, content specialization knowledge tests became part of the certification requirement.

The State Board of Education adopted the NTE Core Battery and 12 NTE Specialty Area Tests as one requirement for teacher and administrator certification.

Passing Scores: Communication Skills - 644, Professional Knowledge - 630, General Knowledge - 645, Specialty Areas (consisting of 12 tests with a scaled score range of 250 to 990)

Passing Rates: Based on over 3,500 individuals taking the tests through 1985: Communication Skills - 92%, Professional Knowledge - 99%, General Knowledge - 88%

Certification Process: Valid for 4 years, a Standard I Certificate is renewable with 8 credits. Valid for 4 years, a Standard II Certificate is renewable with 30 credits above the bachelor's degree or a master's degree. A 5-year Continuing Certificate is available for candidates with 30 credits and 3 years of experience. A 10-year Continuing Certificate is available for candidates with a master's degree and 3 years of experience. Evaluations are being planned for all certificate renewals.

No. of Teachers in 1984: 14,200; 800 (5.6%) hold emergency certification.

Certification Testing New York

Status:	In place since September 1984
Who:	All new certification candidates
Coverage:	General and professional knowledge and communication skills
Instrument:	NTE Core Battery
History:	A task force appointed in 1975 issued a final report to study ways to improve teacher education. They recommended legislation to establish a licensing examination, recognize teaching as a licensed profession, and consider beginning teachers as "interns" to be provided supportive services. This report was presented April 1, 1977. As part of the 1982 legislative/budget proposal, the Board of Regents proposed that the task force's three recommendations be implemented. No action was taken on any of the items during the 1983 legislative session. The ideas were submitted again in 1984. The Board of Regents set September 2, 1984, as the effective date requiring new applicants for certification to take the NTE Core Battery tests.
Passing Scores:	Communication Skills - 650, General Knowledge - 649, Professional Knowledge - 646
Passing Rates:	Communication Skills - 87%, General Knowledge - 79%, Professional Knowledge - 90% for the October 1986 administration.
Certification Process:	A Provisional Certificate is valid for 5 years. A Permanent Certificate, valid for life, requires a master's degree and 2 years' experience.
No. of Teachers in 1984:	164,900; 4,000 (2.4%) hold emergency certification.

Admissions Testing North Carolina

Status:	In place since Spring 1985
Coverage:	Basic reading, writing, mathematics, communication skills, professional knowledge
Instrument:	NTE
History:	By a joint resolution of the State Board of Education and the Board of Governors of the University of North Carolina, the state initiated a Quality Assurance Program in 1978. As part of this program the State Board of Education identified and published a set of verified competencies of certified teachers. Effective Spring 1985, the State Board of Education required the NTE as part of the teacher education program admissions process. The standards were raised to the current levels in 1986. To obtain certification in the state, students must pass the same test with the same passing scores. In addition, candidates for certification must pass subject matter competency examinations.
Passing Scores:	General Knowledge - 631 Communications Skills - 636 Professional Knowledge - 644
Passing Rates:	Not collected
No. of Teacher Education Graduates:	4,500 in 1984
Other Admissions Requirements:	Admissions counseling

Status: In place since Spring 1985

Who: Prospective graduates of teacher education programs

Coverage: Professional and general knowledge, communication, and subject matter skills.

Instrument: NTE

History: In October 1978 the State Board of Education and the Board of Governors of the University of North Carolina began a Quality Assurance program covering a wide range of teacher education and certification activities, including the use of the NTE for entry to and exit from teacher education programs.

Passing Scores: Professional Knowledge - 644, Subject Matter Skills range from 470-550 (both required prior to initial certification)

Communication Skills - 636, General Knowledge - 631 (both required prior to formal acceptance to teacher education programs)

Passing Rates: October 1985

General Knowledge	4,113	Tested	96.5%
Communication Skills	4,067	Tested	96.8%
Professional Knowledge	4,348	Tested	79.9%

Specialty area data too extensive to summarize.

Certification Process: A teacher applicant must complete an approved program, receive a recommendation from the institute of higher education, and obtain a passing score on the NTE in order to be certified. Beginning in 1985, a 2-year Initial Certificate is issued to beginning teachers. Teachers with initial certificates must complete an initial certification program with a qualified employer for 2 years and be assigned to a support team or mentor. A standardized observation system is used for evaluation. Teachers who satisfactorily complete the 2-year program can then receive a 5-year Continuing Certificate that is renewable.

No. of Teachers in 1984: 56,084; the number of teachers holding emergency certification is not available.

Performance Testing

North Carolina

Status: In place since July 1985

Program Name: The Initial Certification Program (ICP)

Who: All first-year teachers and teachers who allow their certificates to expire. Teachers with permanent certification are exempt.

Coverage: The ICP covers 21 competencies in management of instructional time, management of student behavior, instructional monitoring and instructional feedback.

History: In 1978, the State Board of Education and the Board of Governors of the University of North Carolina System issued a joint resolution leading to the establishment of the ICP.

Process: Each teacher is observed at least three times a year and participates in planned staff development activities based on the observation/diagnosis.

Support: Teachers receive feedback on their performance. Training is a local responsibility.

Goals: To help teachers continue to develop skills and demonstrate successful on-the-job performance.

Passing Scores: On-the-job performance is measured by a rating of "at standard" on five critical functions.

Passing Rates: Not available

No. of Teachers Evaluated in 1985: Not available

Admissions Testing North Dakota

Status:	Implementation stage
Coverage:	New teacher education program approval standards adopted in 1986 include the following: The teacher education unit requires assessment of students *admitted* to the unit to objectively and systematically determine specific strengths and weaknesses of personal characteristics and basic skills proficiency of students preparing to teach. The unit requires *all* of the following: (a) standardized basic skills proficiency tests for the basic programs; (b) faculty recommendations; (c) biographical information; (d) successful completion of college/ university coursework with at least a 2.5 GPA on a 4-point scale. In addition, the unit may require the following to assist in determining whether to admit students into the program: (a) standardized personality tests; (b) interviews; (c) video tapes; (d) aptitude tests; (e) others.
Instrument:	The colleges will select appropriate standardized tests.
History:	The North Dakota Teachers' Professional Practices Commission reviewed the 1984 ACT scores of students admitted to teacher education programs in preparation for recommending adoption of program approval standards.
Passing Scores:	The colleges will determine appropriate levels of proficiency as part of the entrance requirements to teacher education.
Passing Rates:	Not applicable
No. of Teacher Education Graduates:	950 in 1986
Other Admissions Requirements:	Faculty recommendations, biographical information, GPA of 2.5 on a 4-point scale.

Status:	North Dakota has not adopted a national standardized testing requirement for certification. It has adopted new program approval standards for teacher education that include use of standardized testing in the college program.
Who:	Prospective graduates of teacher education programs.
Coverage:	Academic and professional knowledge prior to exiting a teacher education program
Instrument:	Colleges will select appropriate tests
History:	In 1986 the North Dakota Teachers' Professional Practices Commission recommended a new set of program approval standards for teacher education that included criteria on competency testing for academic proficiency and professional education prior to graduation and recommendation for certification. These standards were adopted by the state agency and are in the process of being implemented.
Passing Scores:	The colleges will determine appropriate levels of proficiency as part of the program approval process.
Passing Rates:	Not applicable
Certification Process:	An Entrance Certificate is valid for 2 years. A 5-year Renewal Certificate may be issued upon presentation of 2 years of teaching and three positive recommendations from supervisors. Succeeding 5-year renewals require 4 semester hours credit, 30 days' minimum active contracted service, and three positive recommendations. These regulations replaced the life certificates in 1976.
No. of Teachers in 1986:	8,837; 7 (less than 1%) hold emergency certification.

Admissions Testing Ohio

Status:	To be implemented July 1987
Coverage:	Cognitive and affective assessment to assure the potential for attaining the knowledge, attitudes and values essential for effective teaching.
Instrument:	To be determined by each approved teacher education program
History:	In 1984 the Ohio Board of Regents and the State Department of Education established nonbinding standards for admission to colleges and universities within the state that prepare teachers. In December 1985, the State Board of Education mandated assessment for admissions to teacher education programs and for diagnosis of needs to be addressed during the program. As of 1986, 55 school districts require applicants for teaching positions to have NTE or PPST scores on file. Passing scores have not been established.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
No. of Teacher Education Graduates:	5,829 in 1984

Certification Testing Ohio

Status:	To be implemented July 1, 1987
Who:	Teacher education students prior to certification. Beginning in 1987 students graduating in 1991 or later will be required to pass a test.
Coverage:	General, professional education, and curriculum content knowledge
Instrument:	Under study
History:	Since the early 1980's, 55 school districts in the state have banded together to require that applicants for teaching positions have their scores on the NTE or the Pre-Professional Skills Test (PPST) on file. While no cutoff scores were established, the results affect hiring decisions.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	Valid for 4 years, a Provisional Certificate requires completion of an approved program including 300 hours of clinical and field experiences plus student teaching, a recommendation from an approved program, and, when implemented, successful completion of an approved examination. This certificate can be renewed based on successful teaching experience or 6 credits. Valid for 8 years, a Professional Certificate requires 30 semester hour credits beyond a bachelor's degree plus 3 years' teaching under the Provisional Certificate. A Permanent Certificate requires a master's degree and 5 years' teaching under the Professional Certificate.
No. of Teachers in 1986:	87,729; approximately 800 (1%) hold emergency certification.

Admissions Testing Oklahoma

Status:	In place since 1982
Coverage:	Written and spoken English
Instrument:	Determined by individual colleges of education. The Pre-Professional Skills Test (PPST) is scheduled for use in 1989.
History:	Since 1982 the state has required a minimum GPA and assessment of English ability as a requirement for admission to teacher education programs. During the 1986-87 academic year, the Board of Regents is validating the PPST as an admissions test.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
No. of Teacher Education Graduates:	Approximately 2,400 in 1985
Other Admissions Requirements:	GPA of 2.5

Certification Testing Oklahoma

Status:	In place since February 1982
Who:	Individuals applying for a certificate to teach in any subject area in which they were not certified to teach prior to February 1982. Tests may be taken after a student has completed 90 college semester hours and as many times as necessary.
Coverage:	Subject matter skills
Instrument:	Content examinations have been developed covering 34 broad areas
History:	Oklahoma's House Bill 1706 became effective in February 1982. While providing for a wide range of teacher education and certification reforms, the legislation requires that teacher applicants be competent in oral and written English and pass curriculum examinations in the subject areas they wish to teach. The state publishes an annual report on the Teacher Certification Testing Program. The 1985 state legislature stipulated that individuals seeking certification in a new field must also pass an examination.
Passing Scores:	Varies with each subject
Passing Rates:	Of the 26,511 examinees taking the examination between 1982 and 1985, 81% passed on their first attempt and 87% passed within two attempts.
Certification Process:	To receive a 1-year license, a new teacher must graduate from an approved program, pass the certification test, and be recommended by an institution of higher education. The first year of teaching is a supervised internship during which the teacher is helped and evaluated by a three-member Entry-Year Assistance Committee that can either recommend that the teacher be certified or serve an additional year in the internship program. If a second year of internship is recommended, the teacher may select an entirely new committee. After the second year, the committee can recommend either certification or non- certification. A Standard Certificate is valid for 5 years and can be renewed with 8 credits or 3 years of experience. A Full Certificate requires 1 year of experience and successful completion of the entry-year program.
No. of Teachers in 1984:	35,000; 600 (1.7%) hold emergency certification.

Performance Testing — Oklahoma

Status:	In place since February 1982
Program Name:	Entry-Year Assistance Program
Who:	All first-year teachers regardless of where they received their training.
Coverage:	The Oklahoma Observation Instrument is comprised of 36 indicators in four areas: human relations, teaching and assessment, classroom management, and professionalism.
History:	The state legislature has been an active supporter of teacher education and certification activities. In 1980, the legislature passed reforms affecting teacher training, certification, and inservice training.
Support:	Staff development is a separate program. Oklahoma emphasizes local staff development activities. Each local education agency must submit staff development plans and teachers must meet state and local staff development requirements.
Goals:	To provide guidance and assistance to first-year teachers and make recommendations regarding certification.
Process:	A committee of three people, including a teacher, an administrator and a college faculty member, independently observe the beginning teacher three times and meet as a committee three times with the entry-year teacher. The teacher member of the team is responsible for providing 72 hours of observation and consultation. Beginning teachers have 2 years to successfully demonstrate their competence.
Passing Scores:	There is no scoring key for the Oklahoma instrument. Observers write a narrative statement indicating strengths, concerns, and recommendations. Following their third observation, they vote on whether to recommend the candidate for Standard Certification.
Passing Rates:	Not available
No. of Teachers Evaluated in 1985:	Approximately 1,900

Admissions Testing — Oregon

Status: Effective January 1985. Several colleges previously had their own testing programs.

Coverage: Basic reading, writing, and mathematics skills

Instrument: The California Basic Education Skills Test (CBEST) is given six times a year at test centers throughout the state. Candidates may take the examination as many times as necessary.

History: Since 1982, most Oregon colleges of education have required candidates for admission to demonstrate competence in English and mathematics. Most have used the California Achievement Test (CAT), with the 70th percentile English and the 60th percentile in mathematics as passing scores.

In 1984 the State Educational Coordinating Commission completed a comprehensive study of teacher education and recommended several changes. The state legislature did not accept these recommendations.

The state Teacher Standards and Practices Commission adopted regulations that replaced the CAT with the CBEST, effective January 1985.

The state also requires the test for an initial teacher certification. The colleges of education adopted the test and passing rate as an admissions requirement.

Passing Scores: Passing score for each of the three sections is 41 on a scale of 20 to 80. Individuals can also pass with a total score of 123 if no score is under 37. These cut-off scores were established by a review panel of state educators.

Passing Rates: Approximately 77% of the 2,205 undergraduates taking the test between August 1985 and July 1986 passed.

No. of Teacher Education Graduates: 1,700 in 1984

Certification Testing Oregon

Status:	In place since January 1985
Who:	All applicants for initial certification
Coverage:	Basic skills
Instrument:	California Basic Skills Test (CBEST)
History:	In December 1983 the Teacher Standards and Practices Commission (TSPC) voted to require basic skills (writing, reading, and math) testing for initial certification, effective January 1, 1985. The state colleges of education have required the test as an admissions requirement.
Passing Scores:	Passing score for each of the three sections is 41 on a scale of 20 to 80. The passing requirement for the entire test is a score of 123 with no section score lower than 37.
Passing Rates:	Of the 2,973 graduates first taking the test between August 1985 and July 1986, 80.1% have passed. Of all 5,176 test-takers, 78.8% passed.
Certification Process:	A Basic Certificate is valid for 3 years. For high school and special education teachers, renewal requires a fifth year of study. Otherwise, renewal requires 9 credits or 1 year of successful teaching. A Standard Certificate is valid for 5 years. It requires 45 credits, 2 years of successful experience on the Basic Certificate, and an evaluation by local education agency personnel. The Oregon Education Coordinating Commission recommended an alternate certification plan that was rejected by the legislature. Subsequently, the TSPC adopted a proposal that allows teachers with current Oregon certificates to add one or more additional teaching endorsements to their credentials if they successfully pass subject matter tests. The NTE will be used.
No. of Teachers in 1984:	24,413; 417 (2%) hold emergency certification. This includes certified individuals teaching subjects other than their area of authorization.

Certification Testing

Pennsylvania

Status:	To become effective June 1, 1987
Who:	Anyone seeking a provisional certificate
Coverage:	Basic skills, subject matter, and general and professional knowledge.
Instrument:	Selected NTE subject area tests and custom-developed instruments
History:	On September 14, 1984, the Pennsylvania State Board of Education adopted several revisions to the state's certification regulations. The revisions which become effective June 1, 1987, require that anyone seeking a provisional teaching certificate pass tests in subject matter, basic skills, general knowledge, and professional knowledge. Mastery scores are to be determined by the Secretary of Education. The new regulations also require new teachers to serve a 1-year supervised induction period as one of the requirements for permanent certification.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	Presently, a Provisional Certification remains valid for 6 years. It is not renewable. A Permanent Certificate requires 24 credits and 3 years of experience. Some inservice credit may be applied toward the credit hour requirement.
No. of Teachers in 1984:	101,150; 23 (.2%) hold emergency certification.

Rhode Island

Status:	In place since December 1986
Who:	All new applicants for Rhode Island certification
Coverage:	Communication skills and professional and general knowledge
Instrument:	NTE Core Battery
History:	The Commissioner of Education recommended new teacher testing regulations to the State Board in the fall of 1985. The board accepted these recommendations and authorized a validation study of the NTE.
Passing Scores:	General Knowledge - 649, Communication Skills - 657, Professional Knowledge - 648
Passing Rates:	Not applicable
Certification Process:	Certification standards require that teachers seeking initial certificate renewal have 3 inservice credits and 3 semester hours. To receive a 5-year professional certificate, a teacher must have 6 graduate credits in the teaching field and 3 inservice credits. A life certificate may be obtained with a master's degree in the teaching field.
No. of Teachers in 1984:	7,548; 17 (.2%) hold emergency certification.

Admissions Testing

South Carolina

Status:	In place since July 1983
Coverage:	Reading, writing, mathematics
Instrument:	South Carolina Education Entrance Exam (SCEEE). Students have three opportunities to pass the examination. Students repeat only the sections they fail.
History:	In 1979 the state General Assembly passed an act requiring all students entering teacher education to take a basic skills examination. This act led to the development of the SCEEE. It was developed with extensive input from content area specialists representing teacher education institutions and school districts throughout the state. The initial version of the SCEEE was field tested in November 1981, and administered as an entrance examination in February 1983. A newer version of the SCEEE has been in the process of refinement and implementation since 1984. The state prepares a comprehensive annual report outlining the program and results.
Passing Scores:	Writing - 3 on a 4-point scale; Reading - 250 on scale that ranges from approximately 100 to 320; Math - 230 on scale that ranges from approximately 100 to 320.
Passing Rates:	In fall 1984, the passing rates for candidates taking the test the first time were: Writing - 84%, Reading - 68%, Math - 67%. From 1984 through fall 1986, 77% of the applicants taking the exam have passed.
No. of Teacher Education Graduates:	1,282 in 1984
Other Admissions Requirements:	GPA of 2.5 out of 4.0 or a 2.0 and a score above the 50th percentile of examinees in South Carolina taking the ACT or SAT in the year they graduate from high school. Professional recommendations from general education and teacher education faculty also are required.

Certification Testing South Carolina

Status:	Some type of certification testing has been required since 1945. Subject matter tests have been required since 1976. Individuals completing an approved teacher education program in South Carolina after July 1, 1988, will be required to pass a Professional Knowledge Test.
Who:	Applicants for teacher certification
Coverage:	Subject matter skills and professional knowledge
Instrument:	NTE Subject Area Tests and South Carolina Teaching Area Examinations for areas in which NTE subject area tests are not available. A test of pedagogy is currently being validated.
History:	The General Assembly passed Act 187 in 1979. The law requires that applicants for teacher certification pass the NTE or a state-developed proficiency examination in non-NTE areas. The Education Improvement Act of 1984 required the upgrading of teacher education programs approval standards
Passing Scores:	Vary with subject area
Passing Rates:	Vary with subject area. State could not provide examples or overall rate.
Certification Process:	Teacher education students who complete an approved program and satisfy all certification requirements are eligible for standard professional certification. The professional certificate is valid for 5 years and may be renewed with 6 semester hours of appropriate credits. Professional certificates are issued in the following classes: Class III, which requires a bachelor's degree; Class II, which requires 18 graduate hours beyond the bachelor's degree; Class I, which requires a master's degree; Class I (Specialist), which requires a master 's degree plus 30 graduate hours; and Class I (Advanced) which requires an earned doctorate.
No. of Instructional Personnel in 1985:	36,935; the number of teachers with emergency certification is not available.

Performance Testing

South Carolina

Status: In place since September 1983

Program Name: Assessments of Performance in Teaching (APT)

Who: Student teachers and first-year teachers

Coverage: The APT covers 51 objectives in five general skill areas: planning skills, instructional responsibilities, classroom management, communication skills, and attitudes toward student and learning.

History: The Educator Improvement Act of 1979 provides for the establishment of a comprehensive program of training, certification, and evaluation of public educators in the state. This act provides for the development and implementation of observational instruments, and a training program to assure observer reliability.

The APT was first used to evaluate student teachers in 1982 and to make teacher contract decisions in 1983.

Support: Remediation activities, if any, are a local responsibility.

Goals: To determine whether student teachers and provisional contract teachers can apply fundamental teaching skills in the classroom and to inform them of their strengths and weaknesses. Provisional contract teachers are required to meet a standard of 44 out of 51 objectives; there is no standard for student teachers.

Process: The APT procedure calls for three independent observations of different lessons, using the APT checklist. Although not mandatory, the state recommends that the observations be conducted by a principal, a district level employee, and an experienced teacher. Teachers are allowed two opportunities to pass the assessment.

The independent observations of different lessons is also required for the student teachers. The recommended observers are the cooperating classroom teacher, the college or university supervisor, and the principal or principal's designee.

The state has developed a comprehensive program to train observers. During the 1982-83 and 1983-84 school years, 3,527 and 1,195 observers successfully completed training leading to 3-year endorsements as APT observers. Observers are re-endorsed every 3 years.

Passing Scores: 44 out of 51 items

Passing Rates: In 1983: 97% passed on their first evaluation
99% passed in two attempts

No. of Teachers Evaulated:
In 1983-84 - 1,543 teachers
In 1984-85 - 2,323 teachers
- 1,759 student teachers

South Dakota

Status:	Testing has been mandatory since July 1986, but the scores are not yet used as a certification requirement
Who:	All teacher education students
Coverage:	Communication skills, professional knowledge, and specialty areas that apply
Instrument:	NTE Subject Matter Exams
History:	In 1985 the South Dakota Board of Education required students to take the NTE. The scores are not used to determine whether candidates receive certification. Future plans call for the use of the test to determine certification. A validation study is taking place during the 1986-87 school year.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
Certification Process:	In 1986, the state legislature passed a law requiring that all beginning teachers must be supervised and evaluated by a 3-member team. Applicants are issued a 1-year certificate as a beginning teacher and are eligible for a 5-year certification upon satisfactory completion of the supervised experience. The certificate is valid for 5 years and can be renewed with 6 semester hours of credit, 3 of which may be certificate renewal credit approved by the Division of Education.
No. of Teachers in 1984:	8,022; 100 (1.3%) hold emergency certification.

Admissions Testing — Tennessee

Status:	In place since 1985
Coverage:	Reading, writing, mathematics
Instrument:	Pre-Professional Skills Test (PPST)
History:	In 1979 the State Board of Education mandated that beginning in 1982 all applicants to approved teacher education programs must demonstrate competency in basic skills. The California Achievement Test was used with a requirement of 12th grade performance. Applicants also had to present an ACT score of 17 or a combined SAT score of 765. The state's Comprehensive Education Reform Act of 1984 requires use of the PPST for entrance into teacher education programs. The State Department of Education conducted a large study to determine the validity of the PPST as a screening device for teacher education applicants and to develop possible passing scores. A Standards Committee examined the results of the study and selected the PPST.
Passing Scores:	Mathematics - 169, Reading - 169, Writing - 172
Passing Rates:	Not collected
No. of Teacher Education Graduates:	1,700 in 1986
Other Admissions Requirements:	GPA of 2.5 or higher

Certification Testing

Tennessee

Status:	In place since July 1984
Who:	All applicants for teacher certification
Coverage:	Communication skills, general and professional knowledge
Instrument:	NTE Core Battery and Specialty Area Tests
History:	In November 1979 the State Board of Education mandated that beginning January 1981 all applicants for teacher certification must provide the board with a report of their scores on the NTE common exams or NTE Core Battery. In 1984, this was updated to require that certification applicants present minimum qualifying scores on each of the three tests of the Core Battery of the NTE and a minimum score on the Specialty Area Test (if available). The passing scores on the NTE examinations were raised 3 to 4 points effective September 1986.
Passing Scores:	Communication Skills - 644, General Knowledge - 640, Professional Knowledge - 635
Passing Rates:	Data was not of sufficient quality to be released
Certification Process:	Tennessee has a career ladder program with five steps. Graduates of teacher education programs passing the NTE are awarded probationary certification. They can then progress to apprentice teacher, and Career Levels I, II, and III. Teachers are evaluated at the local level during their probationary, apprentice, and Career Level I years. State teams evaluate Career Level II and Career Level III teachers.
No. of Teachers in 1984:	40,000; the number of teachers with emergency certification is not available.

Admissions Testing — Texas

Status:	In place since 1984
Coverage:	Reading, writing, mathematics
Instrument:	Pre-Professional Skills Test (PPST)
History:	In 1981 the state legislature charged the State Board of Education with implementing a basic skills testing program as an entry requirement for teacher education programs. During the 1982-83 academic year, a validation and standard setting study for use of the PPST was conducted. Since 1984, the PPST has been given in 67 testing centers throughout the state. Candidates may take the test until they have satisfactory performance on each of the three tests.
Passing Scores:	Mathematics - 171, Reading - 172, Writing - 173
Passing Rates:	From May 1984 through November 1986, 41,318 students had taken the PPST and 29,311 (70.9 percent) had passed all 3 portions of the examination.
No. of Teacher Education Graduates:	Approximately 10,000 in 1986
Other Admissions Requirements:	Requirements for admission are established by each college and university.

Certification Testing Texas

Status:	In place since May 1986
Who:	Applicants for teacher certification
Coverage:	Professional knowledge
Instrument:	The Examination for the Certification of Educators in Texas (ExCET) is administered three times each year.
History:	In 1981, the state legislature mandated that the State Board of Education require satisfactory performance on comprehensive examinations as a condition to full certification as a teacher or administrator. In Fall 1984, the state began development of the ExCET instruments. As of May 1987, 63 subject area tests and 3 professional knowledge tests had been developed. The first administration of these instruments was in May 1986.
Passing Scores:	Passing standards are set for each test.
Passing Rates:	From May 1986 through February 1987, 44,868 individuals took the ExCET and 38,112 (85%) passed.
Certification Process:	To receive initial certification in Texas, an individual must: complete a baccalaureate program; complete an approved teacher education program, including student teaching; pass the required ExCET tests; and receive a recommendation for certification by an approved teacher education college or university.
No. of Teachers in 1986:	185,000 (estimated); the number of teachers with emergency certification is not available.

Recertification Testing Texas

Status:	Administered for the first time in March 1986; was to be administered three times each year for recertification of individuals initially certified before May 1, 1986.
Program Name:	Texas Examination For Current Administrators and Teachers (TECAT)
Who:	Currently employed teachers and administrators certified before May 1, 1986, and other persons certified prior to this date who wish to have continued certification.
Coverage:	Reading and writing skills
History:	As part of a comprehensive education reform package, the state legislature mandated in 1984 that currently employed teachers and administrators be tested. Individuals were required to pass the TECAT prior to June 30, 1986, to remain employed in Texas public schools. The TECAT is a one-time examination of all persons certified in Texas prior to May 1, 1986. Those seeking certification after that date must pass a certification test (ExCET). In spring 1987, the state legislature passed a bill repealing a requirement that those certified prior to May 1, 1986 be tested in subject matter areas. As of April 1987, the bill had not been signed into law.
Passing Scores:	Reading - 75% of the 55 multiple-choice items; Writing - clearly acceptable performance on an essay or 77% of the multiple-choice items and an acceptable essay.
Passing Rates:	96.7% passed on their first attempt (overall pass rate for the five administrations from April 1986 through February 1987 is 98.6%)
No. of Teachers Tested:	247,167 (March 1986 - February 1987)

Admissions Testing Utah

Status:	In place since 1966
Coverage:	Basic skills
Instrument:	Varies by college of education
History:	The State Department of Education requires competency testing in basic skills prior to admission in teacher education programs. Colleges of education select their own examinations and set their own passing scores.
Passing Scores:	Vary by college
Passing Rates:	Not collected
No. of Teacher Education Graduates:	1,892 in 1984
Other Admissions Requirements:	Minimum GPA established by the colleges of education

Certification Testing Virginia

Status: In place since July 1986

Who: Applicants seeking initial certification

Coverage: Communication skills, general and professional knowledge, subject matter skills

Instrument: NTE Core Battery and specialty area tests

History: The state legislature mandated that applicants for initial certification must pass the NTE Core Battery and specialty area tests. After a validation study of the area tests, recommended cutscores were presented to the Virginia Board of Education in September 1982. A second study to validate the Core Battery plus the specialty area tests was completed in March 1984 and cutscores were established by the Board to become effective July 1986.

Passing Scores: Communication Skills - 649, General Knowledge - 639, Professional Knowledge - 639

Passing Rates: Not available. While the state has data on the number of people passing the NTE, it does not have data on the number failing.

Certification Process: Effective July 1985, 2-year nonrenewable certificates are issued to teachers. During that time the beginning teacher must successfully demonstrate 14 competencies of the Virginia Beginning Teacher Assistant Program.

A Collegiate Professional Certificate is valid for 5 years. Renewal of this certificate is based on 6 semester hours of credit, of which only 3 may be noncollege credit.

A Post-graduate Professional Certificate is valid for 5 years, requires an appropriate graduate degree, and 3 years' teaching experience.

No. of Teachers in 1984: 56,863; 0 (0%) hold emergency certification.

Performance Testing

Virginia

Status:	In place since 1985
Program Name:	Beginning Teacher Assistance Program (BTAP)
Who:	Any teacher seeking continued certification who has not been certified by Virginia before July 1985, and has less than 1 year of full-time successful teaching experience.
Coverage:	Individuals tested in 14 competencies covering academic learning time, student accountability, clarity of lesson structure, individual differences, evaluation, consistent rules, affective climate, learner self-concept, meaningful learning, planning, questioning skills, reinforcement, close supervision, and awareness.
History:	In February 1982, the State Board of Education adopted several requirements concerning teacher certification. These requirements stipulate that beginning teachers must demonstrate satisfactory performance within a 2-year provisional period.
Support:	Workshops are held throughout the state to address the 14 competencies.
Goals:	To provide assurance that every teacher receiving regular certification has demonstrated possession of major competencies and to help beginning teachers develop these competencies.
Process:	An assessment is comprised of three observations by three observers. Beginning teachers have three opportunities to pass the assessment.
Passing Scores:	12 out of 14 competencies
Passing Rates:	Of the fall 1985 participants, 95% passed. A total of 370 (55%) beginning teachers demonstrated the required number of competencies during the first assessment, and an additional 276 (40%) passed during the second assessment. Of the spring 1986 participants, 92% passed. A total of 218 (55%) beginning teachers demonstrated the required number of competencies during the first assessment, and an additional 72 (23%) passed during the second assessment.
No. of Teachers Evaluated in 1985:	During 1985-1986, 987 beginning teachers were assessed (669 were assessed in the fall and 318 in the spring).

Admissions Testing Washington

Status:	In place since 1985
Coverage:	Basic skills
Instrument:	Washington Pre-College Test (WPC), the SAT, or the ACT
History:	In the mid-1960's the State Board of Education established program approval criteria requiring demonstrated competency. In 1978 the State Board adopted new rules designed to strengthen teacher education programs. These rules mandated the current program which was first implemented in 1983. In 1984 the State Board of Education adopted the new admissions testing requirement which was implemented in 1985.
Passing Scores:	Minimum score of 80 on the composite standard scores of the verbal and quantitative subtests of the WPC test. Equivalent SAT and ACT scores are determined annually. In 1986 they were 700 and 16 respectively.
Passing Rates:	Not available
No. of Teacher Education Graduates:	2,007 in 1985
Other Admissions Requirements:	Institutions must establish minimum GPA's.

West Virginia

Status:	In place since September 1985
Coverage:	Reading, writing, speaking, mathematics, listening
Instrument:	Pre-Professional Skills Test and College Outcomes Measures Program in speaking and locally developed tests in listening and computer literacy.
History:	In April 1982, the State Board of Education adopted a policy calling for assessing basic skills for teacher education candidates. A 20-member Basic Skills Task Force composed of practicing teachers and teacher training faculty in the state was appointed by the board to study all available tests. In 1984 the board accepted the task force's recommendation that the PPST be used to assess proficiency in reading, writing, and mathematics, and the College Outcomes Measures Program of the American College Testing Program be used to assess speaking skills. Each college of education is to develop its own listening test.
Passing Scores:	PPST Reading - 172 Math - 172 Writing - 171 COMP Speaking - 17
Passing Rates:	In 1986: Reading - 70%, Math - 68%, Writing - 85%, Speaking - 92%
No. of Teacher Education Graduates:	2,199 in 1985-86
Other Admissions Requirements:	Locally determined; includes GPA

Certification Testing West Virginia

Status:	In place since September 1986
Who:	Anyone completing a teacher education program for which content tests have been developed. Teachers with certification from another state do not need to take a test.
Coverage:	Subject matter skills
Instrument:	The state has developed instruments in 43 subjects. Others are being developed.
History:	In 1982 the State Board of Education adopted a policy providing for standardized assessment procedures in the content specialization component of teacher education programs.
Passing Scores:	Scales scores of 140
Passing Rates:	83% passed on the first administration in October 1986.
Certification Process:	Before being certified, a professional performance assessment must be completed by the applicant's institution of higher education. An Initial Certificate is valid for 3 years. It can be renewed with six credits and an evaluation. A teacher with a master's degree, 5 years experience and an evaluation can receive a 5-year Permanent Certificate. To receive a Permanent Certificate a teacher must have 13 years' experience (during this time, a 5-year Permanent Certificate has been renewed twice).
No. of Teachers in 1984:	22,557; 1,325 (5.9%) hold emergency certification.

Admissions Testing Wisconsin

Status:	To be implemented July 1989
Coverage:	Basic skills in mathematics, reading, writing
Instrument:	Pre-Professional Skills Test (PPST)
History:	In January 1986 the State Department of Public Instruction adopted new standards for approval of teacher education programs. Starting in July 1989, applicants to teacher education programs are required to obtain a passing score on a standardized examination in mathematics, reading, and writing. The examination and the passing scores are to be determined by the State Superintendent.
Passing Scores:	Not applicable
Passing Rates:	Not applicable
No. of Teacher Education Graduates:	2,819 in 1984
Other Admissions Requirements:	GPA of 2.5 or upper 50% of class

Certification Testing — Wisconsin

Status:	To be implemented starting July 1987
Who:	Anyone enrolling in a teacher education program after July 1987 and graduating after August 1990
Coverage:	Certification major, minor, and areas of concentration
Instrument:	To be determined
History:	The State Department of Public Instruction adopted a new set of rules in April 1986 that increased standards for teacher certification. Many of these rules stemmed from recommendations of task forces formed by the State Superintendent and the University of Wisconsin.
Passing Scores:	To be determined
Passing Rates:	Not applicable
Certification Process:	As of July 1983 the state has been issuing a regular license that is valid for 5 years and can be renewed with 6 credit hours or Department of Public Instruction approved inservice or continuing education programs.
No. of Teachers in 1984:	45,350; 1,100 (2.4%) hold emergency certification. Over 90% of teachers on emergency certification are regularly licensed teachers teaching "out of field".

Admissions Testing Wyoming

Status:	In place since 1982
Coverage:	Reading, writing, spelling, and mathematics
Instrument:	California Achievement Test (CAT)
History:	Since 1982 the state's only teacher education program at the University of Wyoming has required students to pass a competency examination prior to admission to the program.
Passing Scores:	70th percentile of high school seniors as of 1986. Previous passing score was the 50th percentile.
Passing Rates:	Not available
No. of Teacher Education Graduates:	300 in 1984
Other Admissions Requirements:	GPA 2.0 or better. This will increase to 2.5 in the 1987 academic year. Applicants are also interviewed prior to admission.

Appendix

The Appendix provides background information pertaining to other sections.

Appendix A provides additional information concerning alternative teacher certification programs. While the chapter on teacher supply and demand outlined the potential of alternative certification programs, this essay illuminates alternative certification by describing elements common across seven such programs.

Appendix B discusses decisions that must be made during test development and validation and which can affect the test characteristics. This discussion of technical issues provides additional insight into the issues raised in the chapter on teacher test content.

Appendix C outlines the skill areas evaluated in one on-the-job performance assessment system. While paper and pencil tests are used to assess candidates' basic skill or subject matter knowledge, an increasing number of states are turning to on-the-job performance measures. As background to the essay on performance testing, this appendix outlines the skill areas covered by Virginia's Beginning Teacher Assessment Program.

Appendix D contains the names and addresses of the state level contacts used in preparing this book. The state-by-state descriptions would not have been possible if it weren't for the cooperation of these individuals.

A.

An Examination of Teacher Alternative Certification Programs[1]

What are the programmatic characteristics of alternative certification programs?

What are the characteristics of individuals being attracted to these programs?

How adequate do the programs appear to be in preparing classroom teachers?

According to information available in the American Association of Colleges for Teacher Education's 1986 survey of state teacher education policies, at least 18 states currently allow alternate routes to certification -- programs designed to tap the pool of college-educated, noneducation majors for the teaching profession.[2]

Alternative certification programs have developed within the context of broader national questions about the selection and preparation of teachers and the status of the teaching profession. Architects of the programs intend them to address local, state, or regional needs for high quality teachers, particularly, but not exclusively, in secondary math and science classrooms. Some advocates view alternative certification programs as a promising means of widening the pool of prospective teachers and encouraging lateral entry into the profession. Often, program participants can have classroom responsibility and draw a teacher's salary shortly after being admitted to a program.

This section describes seven alternative certification programs. Two are affiliated with state departments of education; two with large city school districts; and three with universities. While the programs differ in size and focus, all lead to a regular, nonprovisional teaching certificate. Where possible, commonalities across programs are stressed. More detailed descriptions of particular programs are included in a more detailed technical report by the author.[3]

Salient characteristics of these seven programs are described in table A-1. Two of the programs focus exclusively on the preparation of secondary math and science teachers; one targets potential teachers of all secondary level core academic subjects; and four recruit and prepare teachers for all levels and subjects. The programs vary in size. Four work with less than 30 participants in a cycle. The programs in Houston and Los Angeles and New Jersey's statewide program deal in much larger numbers. All of these programs lead to full certification.

The attrition rates shown in table A-1 refer to the percent of program participants leaving for one reason or another. Program managers are generally pleased with these rates. New Jersey, for example, reports that only 10.6% of the "alternate routers," compared to 16.6% of the traditionally trained teachers, leave during their first year.

Program Components

The typical alternative certification program includes a formal instructional component, some type of intensive field experience, and close supervision of the participant by local school district and/or institution of higher education personnel.

In the more traditionally structured programs, participants are full-time students at a college or university for the first semester and combine student teaching and academic coursework during the second semester. Programs which depart from this pattern feature full- or part-time classroom teaching responsibility for a school year. In these programs, formal instruction occurs during afterschool hours and sometimes on Saturdays. Some programs require coursework and/or classroom observation during the summer as well. Table A-2 outlines components of the seven programs.

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[1] This section was written by Nancy E. Adelman, Policy Studies Associates, Washington, DC.

Table A-1
Characteristics of 7 Alternative Certification Programs

Program	Subject Areas	Enrollment	Attrition Rate
Arizona Partners Project	Math, Science	1985: 22 1986: 6	18%
Harvard Midcareer Math & Science Program	Math, Science	1983: 6 1984: 18 1985: 20	5%
Houston Alternative Program	English, Math, Science, Bilingual/ESL, pre K-5	1985: 330 1986: 100	39%
Los Angeles Unified School District Teacher Trainee Program	Math, Science, English, Social Studies	1984: 160 1985: 90	13%
New Jersey Provisional Teacher Program	All subjects & levels	1985: 186 1986: 260	11%
University of New Mexico/Santa Fe Public Schools Intern Program	All subjects & all levels	1985: 16	6%
University of Southern Maine Teachers for Secondary Schools Program	All secondary level subjects	1986: 15	0%

Formal Instruction

Much of the formal instruction presented to participants in alternative certification programs resembles the content of traditional undergraduate teacher education: (1) philosophical, historical, and sociological foundations of American education and (2) "methods" courses—a rubric that covers instructional strategies, classroom organization and management skills, diagnostic and evaluation techniques, and topics specific to the level or subject to be taught. Alternative certification programs do not include subject matter preparation. Participants are selected for the programs because they have mastered a discipline.

Designers of alternative certification programs have employed different strategies to create a teacher preparation curriculum that (1) meets state requirements for certification, (2) takes into account the postgraduate status and maturity of the populations being recruited, and (3) in most cases synthesizes and compresses the material to be covered into a shorter time frame.

Field Experience

In five of the programs studied (Arizona, Houston, Los Angeles, New Jersey, and the University of New Mexico), participants assume full responsibility for a classroom either on the first day of school or within a month of that time. The programs are rigorous, and it is common for participants to comment on the stress involved in the simultaneous pressure of day-to-day teaching and attending late afternoon or evening classes. New Jersey is modifying the pace of its initial instructional component in response to this feedback.

Harvard and the University of Southern Maine defer classroom placement until the second semester. Participants thus have a semester of education-related coursework as background before encountering a group of students. Participants in these two programs mention the stress of their experience with less frequency.

Supervision

As in traditional student teaching, a mentor teacher is usually assigned to each participant. Unlike the traditional route, however, stipends are provided to many classroom level supervisors.

In general, participants in alternative certification programs receive more supervision than the average student or first-year teacher. The supervisory model used by all the programs is commonly referred to as "clinical supervision." In its purest form, clinical supervision requires a substantial investment of time.

Table A-2
Components of Seven Alternative Certification Programs

Program	Duration	Formal Instruction	Field Instruction	Support Base
Arizona Partners Project	14 mo.	24 credits for certification	2 paid internships in schools and industry	Institution of higher education
Harvard Midcareer Math and Science Project	9 mo.	18 credits	60 hours of observed teaching; 12 weeks of student teaching	Institution of higher education
Houston Alternative Certification Program	12 mo.	40 hours pre-assignment training; 15-20 instructional modules	25 hours of classroom observation; paid full-time teaching	School district
Los Angeles Unified School District Teacher Trainee Program	24 mo.	19 instructional units	Paid full-time teaching	School district
New Jersey Provisional Teacher Program	12 mo.	200 hours	Paid full-time teaching	School district
University of New Mexico/Santa Fe Public Schools Intern Program	14 mo.	32 hours	Summer School, 1-year internship with stipend	Institution of higher education
University of Southern Maine Teachers for Secondary Schools Program	9 mo.	15 credits	1-semester internship	Institution of higher education

Supervision in alternative certification programs may be school-based or may involve both school and university personnel. Building principals play some supervisory role in nearly all the programs.

Participant Characteristics

The alternative certification program participants are typically between the ages of 21 and 40; their undergraduate majors vary, with the sciences and English predominating.

Four of these seven programs specifically recruit recent graduates of selected institutions of higher education. Two others target mid-career and career re-entry candidates, who tend to be over 30.

In this sample, the alternative certification program participants tend to have strong undergraduate backgrounds. Several of the participants attended Ivy League institutions or very selective small liberal arts colleges. Some had graduated with honors. Participants in the large city programs were more likely to be graduates of public universities.

Participants come from a wide range of occupational backgrounds: the military, the clergy, business and industry, wholesale or retail sales, the home, a museum. More than half of those interviewed had some type of previous instructional experience, such as tutoring, emergency or substitute teaching, college-level teaching, or the Peace Corps.

By far the most common reason cited for entering an alternative certification program was a personal commitment to enter teaching at some point in their careers. Participants were also attracted to the program because of on-the-job training with pay and the lack of emphasis on "mickey-mouse" education courses. Mid-career people tended to have more thoughtful or deliberate motivations for entering a program. Not surprisingly, the recent college graduates were somewhat more tentative in expressing their commitment to the profession; for them teaching was something to be tried for awhile.

Costs

The average per participant cost of the program is $4,795. The main budget lines are the cost of instruction/supervision and the financial support of participants. Forgivable loans and tuition waivers are common mechanisms for student support. As mentioned earlier, participants are typically earning regular teacher salaries while in the program.

Program Strengths and Weaknesses: Participant Points of View

Strengths

Despite structural differences among the programs, several common themes arose with regard to perceived program strengths. On-the-job training, instructional content, peer support systems, program selectiveness, and the quality of the supervision were mentioned frequently as strengths by program participants. Although they were most often *ad hoc*, peer support systems emerged as a particularly critical element for many participants. The opportunity to compare notes, complain, and counsel each other was often cited as more helpful than the planned curriculum.

Weaknesses

Participant criticisms of the programs grouped around four themes: scheduling problems, instructional content of the program, their lack of preparation to enter the classroom, and placements. Scheduling problems were program specific and centered on the burden of late afternoon or evening classes after a full day of teaching. In terms of instructional content, individuals frequently expressed a desire for more "how to" courses—how to write a lesson plan, how to set up a gradebook, how to handle a discipline problem, how to construct a test.

Conclusions

The seven alternative certification programs seek to recruit, train, and induct the best available potential teachers in the local labor market. All apply selective admissions standards. The programs are carefully designed to provide adequate methodological background for and maximum supervisory support during the initial teaching experience, although optimum scheduling of program components has not been perfected in some cases.

Most alternative certification programs have been developed in response to concern about issues of teacher quantity and quality. While such programs are not the whole answer, they are making a significant contribution to maintaining the balance between teacher supply and demand in the areas where they are located. Assuming that all the participants who enrolled in these seven programs in 1985-86 completed the requirements and found teaching positions, nearly 700 new teachers would have entered the workforce with over 60 percent of them in urban areas that have reported teacher shortages.

Summary

1. At least 18 states have provisions allowing alternative routes to teacher certification.

2. The typical alternative certification program includes a formal instruction component, intensive field experience, and close supervision. In some programs, participants are given classroom responsibilities and draw a full teacher's salary shortly after program admission. Other programs defer classroom placement until the second semester.

3. Participants in the seven examined programs have come from a wide range of occupational and educational backgrounds.

4. The support provided to program participants has appeared to be a strength; criticisms of the programs have centered around scheduling problems, instructional content, lack of preparation before entering the classroom, and placements.

Notes:

1. This section is based on a survey conducted for the U.S. Department of Education, Planning and Evaluation Services Division under Contract 300-85-0103. For each alternative certification program in the sample, telephone interviews were conducted with program administrators, program participants, supervisors/mentors of program participants, and traditionally trained teachers in the school where the program participants were placed. All interviews were unstructured. Administrators were asked to describe the essential elements of their programs, including recruitment, selection, and application procedures, training provided, program and participation evaluation procedures, costs and funding sources. Participants answered questions about their age, educational background, previous experience, motivation for entering the program, and experiences in the program. Supervisors commented on factors related to subject matter and instructional competence of the teacher candidates. Finally, traditionally trained teachers were asked to discuss their attitudes toward alternative certification programs generally and specifically about the competence of the particular alternative route candidates with whom they had personal contact.

2. The states included in this count are Arizona, California, Colorado, Delaware, Florida, Georgia, Louisiana, Maine, Massachusetts, Mississippi, Missouri, New Hampshire, New Jersey, Oklahoma, Pennsylvania, Texas, and Virginia. Other states are considering alternate routes during the 1987-88 legislative sessions.

3. Adelman, N.E., *An Exploratory Study of Teacher Alternative Certification and Retraining Programs*, Washington, DC: Policy Study Associates, October 1986.

B.

Technical Issues

How are teacher tests developed and validated? What issues are raised in this process?

Once a decision has been made to implement a teacher testing program, states are then confronted with decisions concerning what instruments to use. They can develop their own instruments, they can use existing instruments, or they can design their testing program to incorporate some custom-developed instruments and some commercially available instruments.

Regardless of whether a state is developing its own instrument or selecting one that is commercially available, sound practice calls for validation studies to evaluate the correspondence between a given test's actual characteristics and the goals of the testing program.

Teacher certification programs are usually designed to meet one or more of the following goals: 1) to assure that certified teachers have the knowledge and skills necessary to teach, 2) to assure that certified teachers act in a professionally acceptable manner, or 3) to assure that certified teachers positively and effectively influence students' development.

In-depth validation studies are conducted to evaluate whether a test can provide a reasonable basis for making inferences concerning the goals. These validation studies often involve gathering evidence that the test content is appropriate, gathering evidence that the test scores are related to desired outcomes, and analyzing test results to aid in setting passing scores.

This appendix discusses the methodological issues confronting those who develop and validate teacher certification tests. The procedures most often used in validation studies are described, some of the decisions made in the process are identified, and issues stemming from these decisions are discussed.

Content Related Evidence

Content related evidence is gathered to evaluate whether the items on a proposed or existing test assess skills related to a particular job. This evidence is typically gathered by conducting a job relatedness study to identify the desired skills and an item classification study to evaluate relative emphasis.

The Job Relatedness Study

The first step in developing and validating a test is to make sure the proposed content is related to the job of teaching.[1] The procedural details of this study depend on whether the agency is developing or selecting a test, whether the test is a subject matter or professional knowledge test, and what the test will be used for.

In developing a test of professional knowledge, the job relatedness study begins with an analysis resulting in a description of the tasks performed by entry-level teachers or by teachers in general. Information is gathered from a variety of sources. Curriculum guides, textbooks, research on teaching, and other documents describing the job of teaching are reviewed. Practicing teachers and administrators, teacher education and teacher effectiveness researchers, and teacher educators are consulted. After an initial list of job elements is developed, experts are interviewed or surveyed to determine if any potentially important job elements have been excluded from the list.

After the job description is completed, a survey is conducted requesting respondents to rate the elements of the job description on one or more criteria. The respondents are often practicing teachers, but may be others such as principals and teacher educators. One rating criterion is usually the importance of the job element to teaching practice in general or to teaching as practiced by entry-level teachers. A second common criterion is the frequency with which the job elements are invoked in teaching practice. The ratings of each job element are combined and summary statistics are computed. These statistics are measures of the degree to which each job element is job related.

The same general procedures are followed in the development of a subject matter test. The items rated by the survey

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This section was written by James Algina and Sue M. Legg, University of Florida.

respondents, however, are descriptions of subject matter rather than job elements. In developing the subject matter descriptions, it is important to keep the certification purposes in mind. If, for example, the purpose involves the knowledge and skill base required to perform the tasks expected of entry-level teachers, it may be inappropriate for the subject matter descriptions to focus exclusively on instructional objectives corresponding to the grade level for the certificate.

The Item Classification Study

An item classification study is conducted to investigate whether the items on a particular form of a test are proportionately representative of the content in the test plan developed from the job description.

Experts on the content of the test are given descriptions of the topics covered by the test. Each expert independently judges whether each item belongs to its intended topic.

Issues

The job relatedness and the item classification studies involve task definition, questionnaire development, sampling, and statistical analysis. These studies raise several methodological and procedural issues:

1. The results of the job relatedness study may differ depending on whether the respondents are asked to rate the importance of job elements for (a) the job of teaching, (b) professionally acceptable practice for entry-level teachers, and (c) effective teaching. When the goals of the program are not very clearly defined, proposed content cannot be properly evaluated. Programs should be careful in defining their goals and respondent tasks. Using ambiguous terms, such as "professionally acceptable practice" and "effective teaching," does not remedy the situation as these terms do not provide an adequate basis for making judgments

2. Because the job description is the basis for the test plan and the test plan is the basis for developing the test items, the job description must be comprehensive. In addition, the job elements should be written at an appropriate level of detail. A job element that is too general may fail to provide the basis for some critical job elements and may result in large numbers of unimportant items. The likelihood of unimportant items can be reduced, but not eliminated, by a detailed job description that has been thoroughly evaluated.

3. Because job relatedness studies rely on expert judgment, results can differ depending on the sample surveyed. For example, in studying job relatedness of a professional knowledge test, respondents with expertise in elementary school, middle school, high school, and special education have different perspectives which can be expected to affect their judgments. Differences between perspectives should be analyzed carefully, and sampling plans formed with these perspectives in mind.

4. If sampling plans and sample sizes are not determined in light of a desired level of accuracy for the results, then the resulting statistics might not be stable. They might fluctuate markedly if the job relatedness study were repeated. Clearly, such results are not a reliable guide for test development or test inference validation. This is an important issue if a study is improperly planned or inadequately funded.

5. No simple guidelines exist for selecting the criteria for determining whether a job element is sufficiently job related to be included in the test plan. Too lenient a criteria will result in the inclusion of unimportant job elements. Too strict a criteria will result in the exclusion of important job elements.

6. A fundamental question is whether a job relatedness study should be a major basis for developing or selecting basic skill tests. Do the citizens of a state have a right to expect public school teachers to have a level of literacy beyond the level that is prerequisite to adequate job performance? Those who say "yes" agree that parents have a right to expect strong role models for literacy. Those who say "no" are only expecting teachers who have achieved literacy levels that are prerequisite to adequate job performance.

Criterion Related Evidence

Criterion related evidence is gathered to evaluate whether test scores are related to desired outcomes. There are two basic designs for collecting criterion related evidence: predictive and concurrent. In a predictive design, the criterion data are collected some time after the test score data are collected. In a concurrent study the test score and criterion data are collected more or less simultaneously. The appropriate time span between collecting the test score and criterion data depends on the purposes for the testing programs.

Teacher certification programs designed to assure that certified teachers engage in professionally acceptable practice are based on the inference that examinees with higher test scores are more likely to engage in professionally acceptable practice. It is debatable whether content related evidence is a sufficient basis to justify the validity of the inference. The argument in favor of additional evidence is that the inference is predictive: test scores should predict teacher performance in the classroom. Consequently, criterion related evidence, collected in a predictive design, is required.

The argument against the necessity of additional evidence is likely to be based on the *Uniform Guidelines on Employee Selection Procedures,*[2] established by the Equal Employment Opportunity Commission. When the purpose of a test is to divide applicants into unemployable and employable groups, the *Uniform Guidelines* permit the test to be justified by content related evidence like that collected in many teacher certification testing programs. If an employer can identify knowledge that is critical to job performance, then a prospective employee without that knowledge can be rejected because he or she cannot be expected to adequately perform the job. Applicants who have the required knowledge must be placed in the employable pool even though having that knowledge does not guarantee adequate job performance. That is, there is no inference that examinees who pass the test will, if hired, be adequate employees.

The situation is quite different when the purpose is to ensure that certified teachers will perform in a professionally acceptable fashion. Clearly, the inference is that examinees with higher scores will be more likely to perform in a professionally acceptable fashion than those with lower scores.

Another purpose for teacher certification programs is to ensure that certified teachers have positive effects on their students' development. The inference associated with this purpose is predictive: examinees with higher test scores will tend to be more effective teachers. This inference cannot be fully justified by content related evidence.

Issues

Although criterion related evidence is clearly important for justifying some of the inferences made by using teacher certification tests, some argue that practical constraints make collecting the necessary data difficult, if not impossible:

1. Not all the needed data can be collected, therefore making the evaluation of validity difficult. It is impossible to obtain criterion data for failing applicants barred from teaching positions. Some argue that although passing and failing examinees would have different criterion scores if complete data could be collected, there is no reason to expect criterion score differences among passing examinees.[3] Also, not all passing applicants take teaching positions; problems can arise if certificate holders who obtain teaching jobs are a nonrepresentative sample of those who pass the test. This possibility can be investigated empirically.

2. It is difficult to obtain valid criterion measures because of the wide variety of situations in which teachers work. Consequently, it is extremely difficult, if not impossible to determine criteria that apply to all certificate holders. There is nothing in the logic of criterion related evidence, however, that requires a single study of all certified teachers. Moreover, it may be possible to separate the work situations into subsets that are sufficiently homogeneous for common criteria to apply and to collect predictive evidence in several of these subsets.

3. Measures of teacher performance in the classroom are not yet well developed, although efforts to develop low-inference measures of teacher performance are underway and may prove useful in the near future.

Standard Setting

Standard setting is the process of determining the minimum score an examinee can earn on the test and still be eligible for certification.

Although several types of standard-setting methods exist, in teacher certification testing one type has been used almost exclusively. In a typical example,[4] a panel of experts reviews items on an item-by-item basis. For each item each judge is asked: "Should a person with minimal competency in the teaching field be able to answer this item correctly?" Judges are to answer "no" if the content of the item is too trivial or too sophisticated, "insufficient information" if they are unfamiliar with the content of the item, and "yes" otherwise. For each item, the number of yes answers is divided by the number of yes and no answers. The minimum passing score is calculated by summing these proportions over the items on the test.

It must be noted, however, that while appearing to provide an objective cutoff score, even the most well designed standard setting survey can do no more than determine a subjective standard for certification. This suggests the need to collect additional kinds of information prior to setting a final standard.

Several alternative competing methodologies exist. One possibility is to analyze the test scores of examinee groups likely to be more competent and examinee groups likely to be less competent than the teacher certificate candidates. For example, with a professional knowledge test it might be useful to obtain test scores on practicing teachers considered to be just beyond entry level and college seniors who have not taken any pedagogy courses.

Another possibility is to conduct mock employment interviews with examinees located at several score points throughout the score scale. The interview might consist of a series of questions about teaching problems entry-level teachers are likely to face. Based on the interviews, mock employment decisions would be made. A third possibility is to have a panel of experts take the test. Then, for each of several scores, each expert would estimate the probability that an examinee with that score would be able to perform the tasks expected of an entry-level teacher. The data from the standard setting survey along with the data from the other studies would be assembled. These data would be reviewed by the body legally responsible for standard setting, or its designee, and used in setting a final standard.

Issues

In addition to what data to collect and how to collect it, three other issues are likely to arise in standard setting:

1. What impact should measurement error have on standard setting? When the standard setting data are assembled and a standard is chosen, it can be viewed as the standard that would apply if the measurement errors were removed from the examinees' observed scores. These errorless scores are commonly referred to as true scores. Because tests generally have some degree of measurement error, adjustment to the initial standard is often considered. In determining the amount of adjustment, four types of examinees are relevant:

(a) true positives, examinees with observed scores above the adjusted standard and true scores above the initial standard;

(b) true negatives, examinees with observed scores below the adjusted standard and true scores below the initial standard;

(c) false positives, examinees with observed scores above the adjusted standard and true scores below the initial standard;

(d) false negatives, examinees with observed scores below the adjusted standard and true scores above the initial standard.

The amount and direction of adjustment of the standard depends on the utilities associated with the four possibilities. In the simplest case, the utilities for the true positives and true negatives are equal and larger than the utilities for the false positives and false negatives. Then, the adjustment of the standard depends on whether the false positive or false negative decisions have less utility. When the concern for false rejections of capable candidates outweighs the concern for false acceptance of incompetent candidates, a situation that frequently holds in teacher certification testing, the standard is adjusted downward.

2. What impact should teacher supply have on standards? Should standards be adjusted upward in times of teacher oversupply and downward in times in undersupply? Should they be adjusted so that the "right" percentage of candidates pass?

3. Should a single standard be set for a total score across multiple tests or should a separate standard be set for each test? When a testing program is used for predictive purposes, the use of separate standards implies that failure to exceed the standard on any one test is theoretically associated with a sharp decrement in performance on the criterion, namely future teaching ability.

Summary

1. Content relevance, evidence of appropriateness, and standards are typically examined in developing teacher tests.
2. Technical issues arise in the process. Many of these issues can be resolved with adequate planning, an adequate number of examinees, and adequate funds.
3. Decisions made early in the process concerning program goals affect the methods used in test development and validation.
4. Since the process relies on expert judgment, decisions made regarding panel composition and analytic technique can alter results.
5. The data from a standard setting study provide a basis for establishing cutoff scores. Judgment is required in order to adjust for measurement errors and establish the final passing scores.

Notes:

1. Mehrens, W.A., "Validity Issues in Teacher Competency Tests," Unpublished manuscript. Gainesville, FL: University of Florida, Institute for Student Assessment and Evaluation, 1986.

2. Equal Employment Opportunity Commission, Office of Personnel Management, Department of Justice & Department of the Treasury (1978). Adoption by four agencies of the uniform guidelines on employee selection procedures. Federal Register, 43, 388290-38315.

3. Cross, L.H., "Validation of the NTE Tests for Certification Decisions," *Educational Measurement Issues and Practices*, 1985, 4, 7-10.

4. See P.M. Nassif, "Teacher Certification Testing Technical Challenges: Part I," In W.P. Gorth and M.L. Chernoff (eds.), *Testing for Teacher Certification*, Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1985.

C.

The Fourteen Competencies of the Virginia Beginning Teacher Assessment Program

This list is taken directly from *Beginning Teacher Assessment Program: Questions and Answers about the Assessment and Assistance Components,* published by the Virginia State Department of Education in 1986.

1. Academic Learning Time

The competent teacher knows that learning is directly related to the time students spend on learning activities.

The beginning teacher should demonstrate awareness of the importance of the effective use of learning time by:

- minimizing time spent on noninstructional activities
- keeping the student involved in assigned tasks
- keeping attention focused on the lesson
- planning initial learning activities

2. Student Accountability

The competent teacher knows the importance of holding students responsible for completing assigned tasks.

The beginning teacher should demonstrate knowledge of the importance of student accountability by:

- planning the tasks that each student is expected to complete
- making students understand what they are expected to accomplish
- explaining the consequences of not completing an assigned task
- making certain that students work on their tasks
- making certain that assigned tasks are completed

3. Clarity of Lesson Structure

The competent teacher knows that the lesson should be presented in a systematic manner consistent with the objectives of instruction. Research shows that students learn best when they understand how each part of the learning activity relates to the other parts and to the whole concept.

The beginning teacher should demonstrate knowledge of the importance of clarity in the structure of the lesson by:

- preparing outlines, reviews, and summaries in advance of the classroom sessions
- beginning the lesson or unit with a statement of purpose
- helping students to understand the relationship between one part of a lesson and another
- ending the lesson with a summary or review

4. Individual Differences

The competent teacher knows that learners progress at different speeds, learn in different ways, and respond to different kinds of motivation. Research indicates that teaching strategies should be adapted to these differences.

The beginning teacher should demonstrate knowledge of the importance of adapting to individual differences by:

- planning ways of dealing with differences in students' abilities, cultural backgrounds, or handicaps
- defining different objectives for different students
- providing alternative ways for students to achieve common objectives
- providing for learners with special problems, such as hearing or visual impairment or severe learning difficulties
- providing for learners with unusual talents or abilities
- arranging the classroom for easy access for physically handicapped students

5. Evaluation

The competent teacher knows that learning is facilitated when instructional objectives are communicated to students and when those objectives coincide with the objectives of evaluation. Important information about individual student progress can be obtained informally in the classroom and can be used in making tactical teaching decisions. Additionally, formal assessment of each student's progress is important in making decisions about instruction, grading, and promotion.

The beginning teacher should demonstrate knowledge of the importance of formal and informal evaluation by:

- planning evaluation (formal and informal) whenever he or she plans instruction
- designing formal evaluation procedures

- asking questions, observing students' work, and checking students' progress regularly
- informing students about how their performance will be evaluated

6. Consistent Rules

The competent teacher knows that rules for classroom behavior must be clear and consistent, and that students must understand the rules and consequences of violating them.

The beginning teacher should demonstrate knowledge of the importance of consistency in enforcing rules by:

- setting rules that are understood by students
- citing the rule when students disobey it

7. Affective Climate

The competent teacher knows that learning occurs more readily in a classroom environment that is nonpunitive and reflects acceptance of students' behavior.

The beginning teacher should demonstrate knowledge of the importance of a psychologically supportive emotional climate in the classroom by:

- avoiding hostility and a punitive environment
- acting in a relaxed, good-humored way, and accepting students' behavior
- showing consideration for students
- showing awareness and appreciation of cultural differences
- making the physical environment as attractive as possible

8. Learner Self-Concept

The competent teacher knows that a student's achievement may be enhanced by improving his or her self-concept; the student's self-concept is enhanced if the teacher's expectations are high and if the teacher appreciates the student's personal worth.

The beginning teacher should demonstrate knowledge of the importance of enhancing student's self-concepts by:

- planning challenging lessons
- encouraging and prompting a student who has difficulty in answering questions correctly
- praising students when they perform difficult tasks or give correct answers to difficult questions
- showing courtesy to students

9. Meaningful Learning

The competent teacher knows that learning takes place when the material to be learned is related to material already learned.

The beginning teacher should demonstrate knowledge of the importance of meaningful learning activities by:

- planning ways of relating instruction to the interests and knowledge of students
- pointing out relationships between what is being taught and what the student already knows
- pointing out relationships between what is being taught and the "real world" interests of students
- asking questions that require students to identify relationships between what they are learning and what they already know
- asking questions of students that require them to identify relationships between what they are learning and something that is important to them outside the classroom
- relating instruction to the cultural backgrounds of students

10. Planning

The competent teacher knows the importance of good planning and is aware that: (1) learning activities should match the instructional objectives; (2) learning is facilitated when ideas are communicated in several different ways; (3) the current literature on the teaching profession should be consulted regularly; and (4) students' scores on standardized tests contain important and useful information about the class as a group and about individual students.

The beginning teacher should demonstrate knowledge of the importance of good planning by:

- using test data in defining objectives or choosing learning activities and materials
- using professional literature in defining objectives or choosing learning activities
- defining objectives that will assist students in achieving long-term goals
- defining objectives on the basis of differing needs of groups and individuals
- defining objectives in measurable terms
- using information about test reliability and validity
- using objectives as a basis for planning learning activities
- planning different activities for students with different abilities, interests, and cultural backgrounds
- planning alternative ways for students to achieve the same objectives
- planning for the use of a variety of instructional media
- planning more than one way to present material to students

11. Questioning Skill

The competent teacher knows how to ask questions to develop students' knowledge and recognizes that asking questions is a major professional teaching tool.

The beginning teacher should demonstrate knowledge of the importance of skillful questioning by:

a) conducting drill or practice sessions that include
  - asking relatively easy questions to which the teacher expects one specific answer, with little or no probing or follow-up (convergent questions)

b) conducting classroom discussion by
  - asking questions to which the teacher does not expect one particular answer (divergent questions)
  - redirecting a question in which the teacher repeats or rephrases the question to another student
  - accepting learners' answers

c) conducting recitations by
  - asking questions that are mostly convergent or probing, or extending a question relating to student response
  - giving positive or negative feedback on students' answers

d) developing new content by
  - using convergent and probing questions rather than divergent questions
  - giving positive feedback or praise when a difficult question is answered

12. Reinforcement

The competent teacher demonstrates awareness that the skillful use of reinforcement encourages or discourages particular behaviors.

The beginning teacher should demonstrate knowledge of this competency and its application to classroom teaching by:

- giving positive feedback
- avoiding using punishment to motivate students
- calling attention to desirable behaviors

13. Close Supervision

The competent teacher knows that students learn more during individual and small-group activities when the activities are monitored and the teacher assists and encourages each student.

The beginning teacher should demonstrate knowledge of the importance of close supervision of students when they are working as individuals or in small groups by:

- monitoring their activities
- helping students who have problems

14. Awareness

The competent teacher knows that effective classroom management requires that the teacher knows what is occurring in the classroom and that students are aware of this fact.

The beginning teacher should demonstrate knowledge of the importance of this competency by:

- moving about the classroom or constantly scanning it
- constantly monitoring the level of interest of students
- making students aware that the teacher knows what is going on

D.

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